

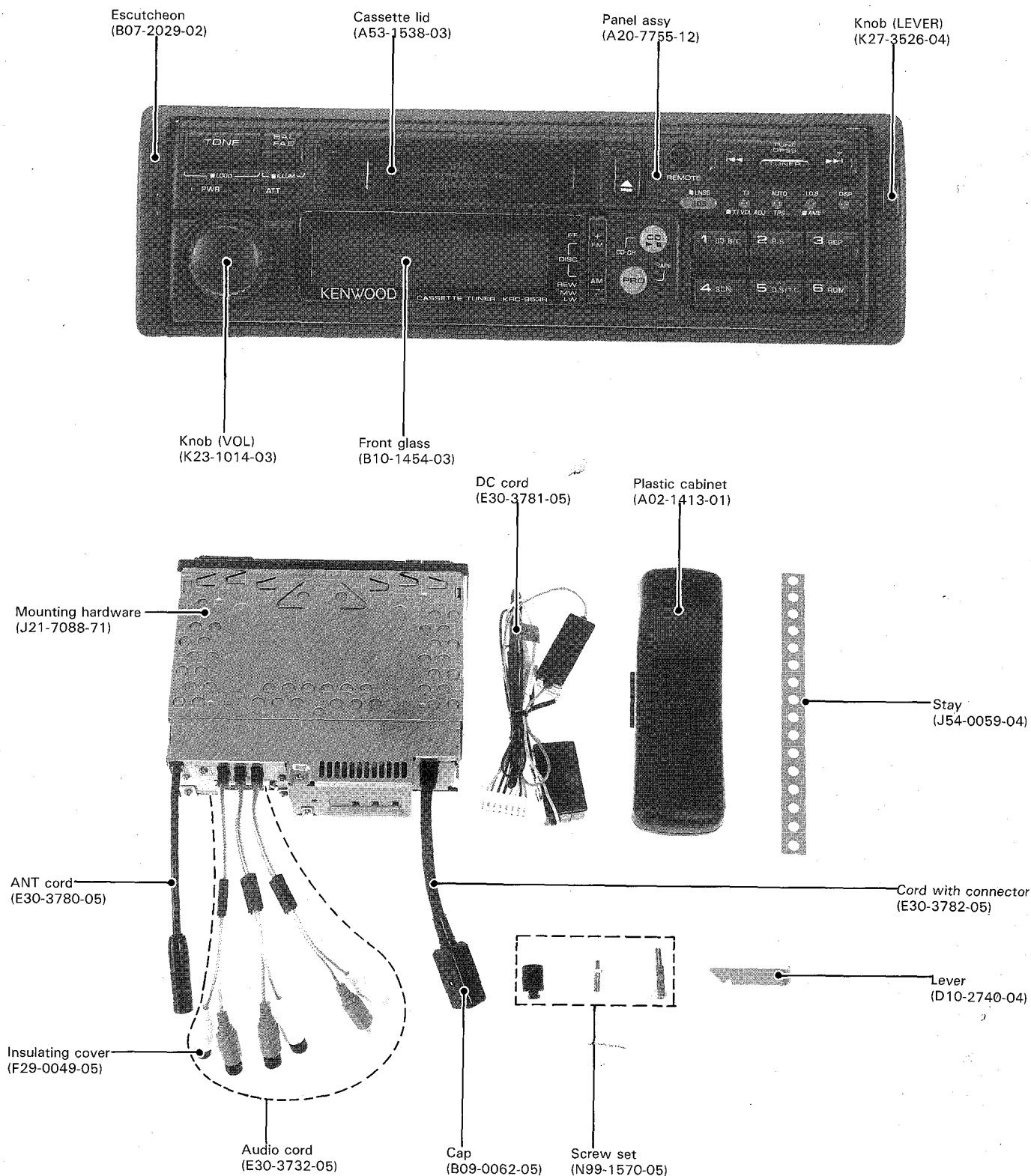
RDS CD-CH CONTROL CASSETTE TUNER

KRC-953R

SERVICE MANUAL

KENWOOD

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B51-6434-00(MC)1968

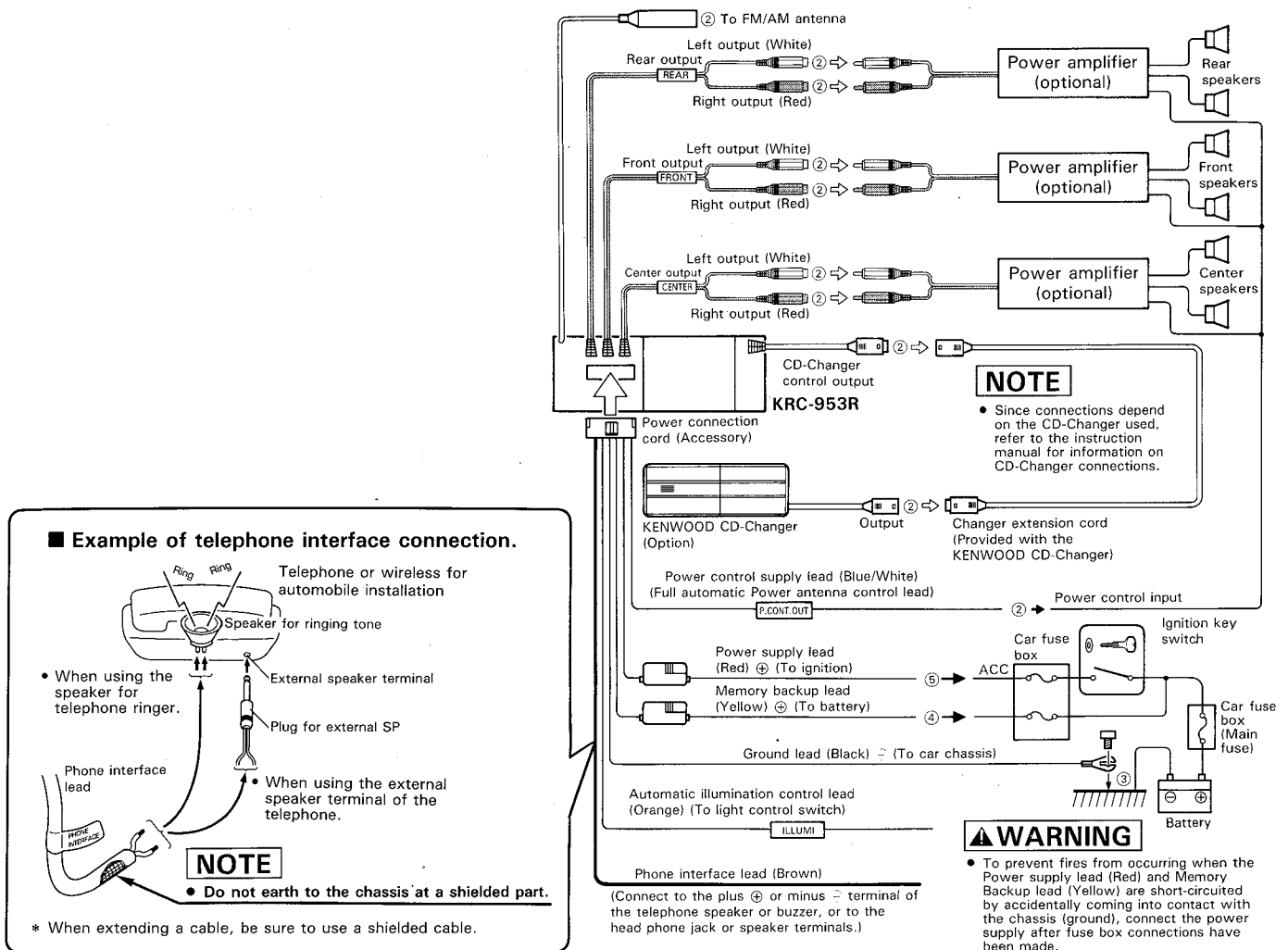


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CONNECTIONS



TROUBLE SHOOTING GUIDE

This unit displays various error indications to show the following messages.

E-01: No disc magazine in the changer, or the magazine is not set completely.

E-02: No discs in the disc magazine.

E-04: Disc is too dirty.

Condensation has occurred on the disc, or water drops are on the disc.

Disc is set upside down.

E-99: Operation incorrect due to something being defective.

Press the Reset button on this unit.

If the "E-99" indication does not disappear with this operation, consult your nearest KENWOOD Service Agent.

E-0D: ● When the temperature exceeds 60°C, the protection circuit is engaged to stop any operation. At this time, this indication will appear.

● Open a window or turn the air-conditioner ON to lower the temperature. After a while, this indication will go out.

● This indication also appears for several seconds when making connections, or when the Reset button is pressed.

LOAD: This indication appears while a disc is being changed inside the changer.

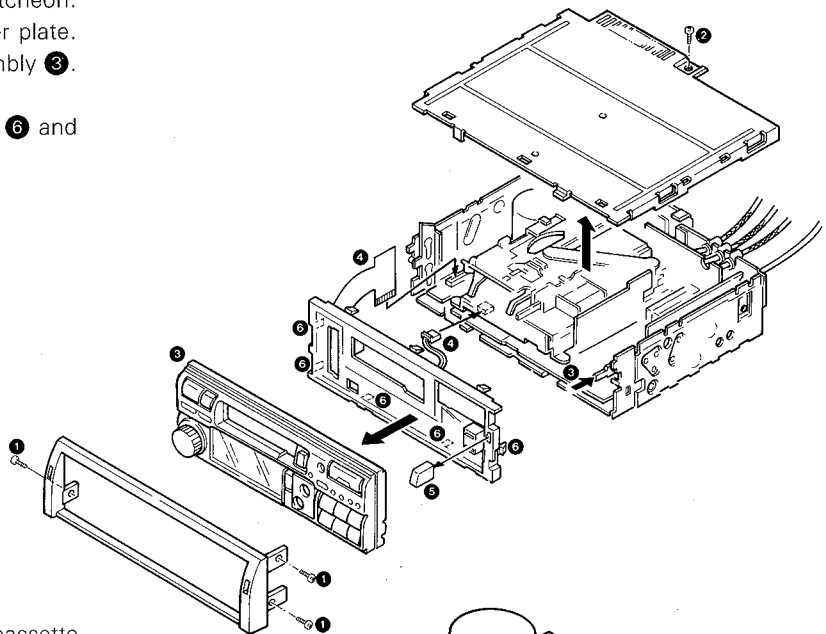
NOTE

Random play, Track repeat or Track/Disc scan cannot be initiated while the load indication is displayed.

* When no indicator appears in this unit and only illumination appears, the cable connector may nearly be disconnected.

DISSASSEMBLY FOR REPAIR

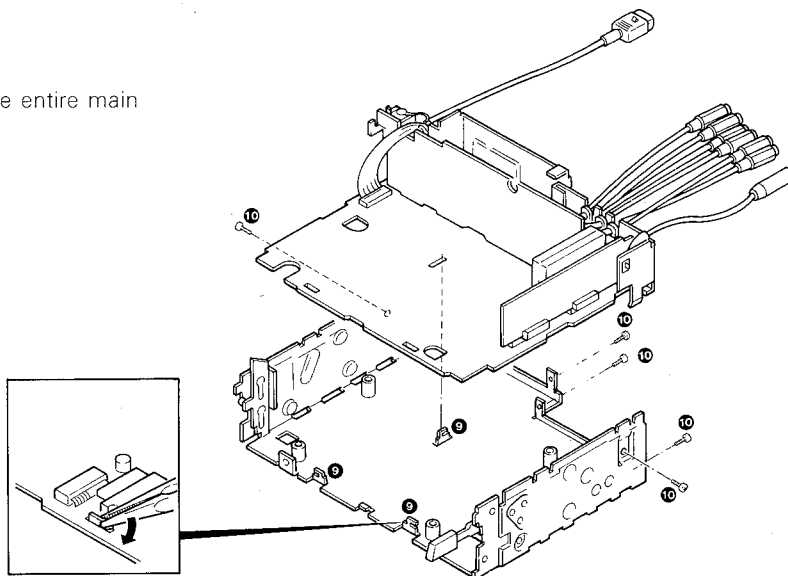
1. Remove the three screws ❶ and remove the escutcheon.
2. Remove the single screw ❷ and remove the upper plate.
3. Press the lock button and remove the switch assembly ❸.
4. Remove the two connectors ❹.
5. Remove the knob ❺ and press in on the five tabs ❻ and remove the sub panel.



6. Remove the two connectors ❺.
7. Remove the four screws ❽ and remove the cassette mechanism.

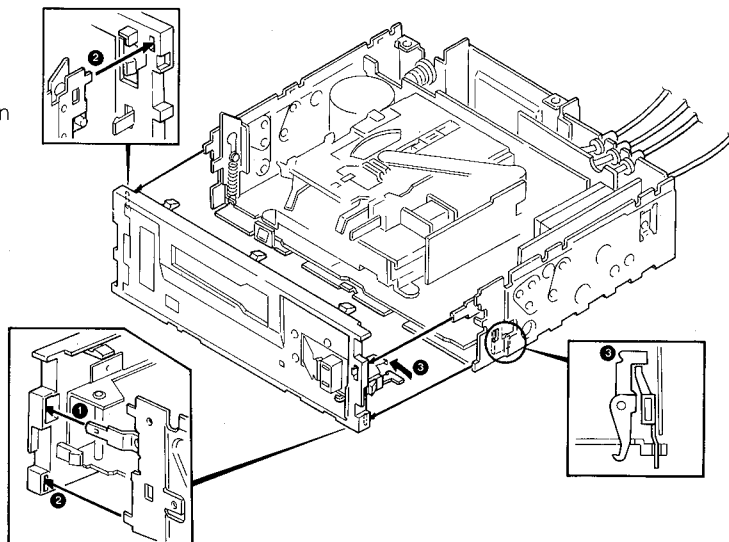
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8. Unbend the three tabs ⑨.
9. Remove the five screws ⑩ and remove the entire main p.c. board.



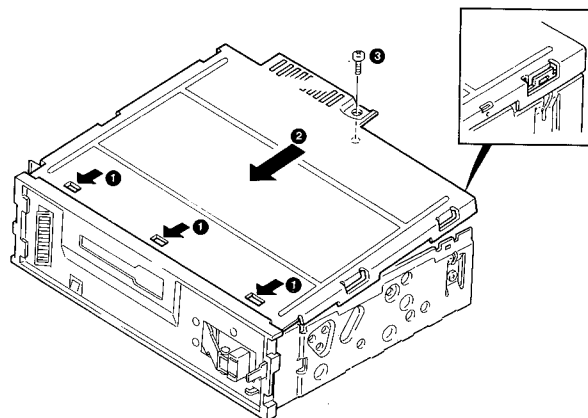
Sub panel assembly

1. While pressing the arm, align the lever and the sub panel hole ①.
2. Insert the chassis projections into the sub panel holes accordingly ②.
3. Be sure to assemble the arm and the lever as shown in the figure ③.



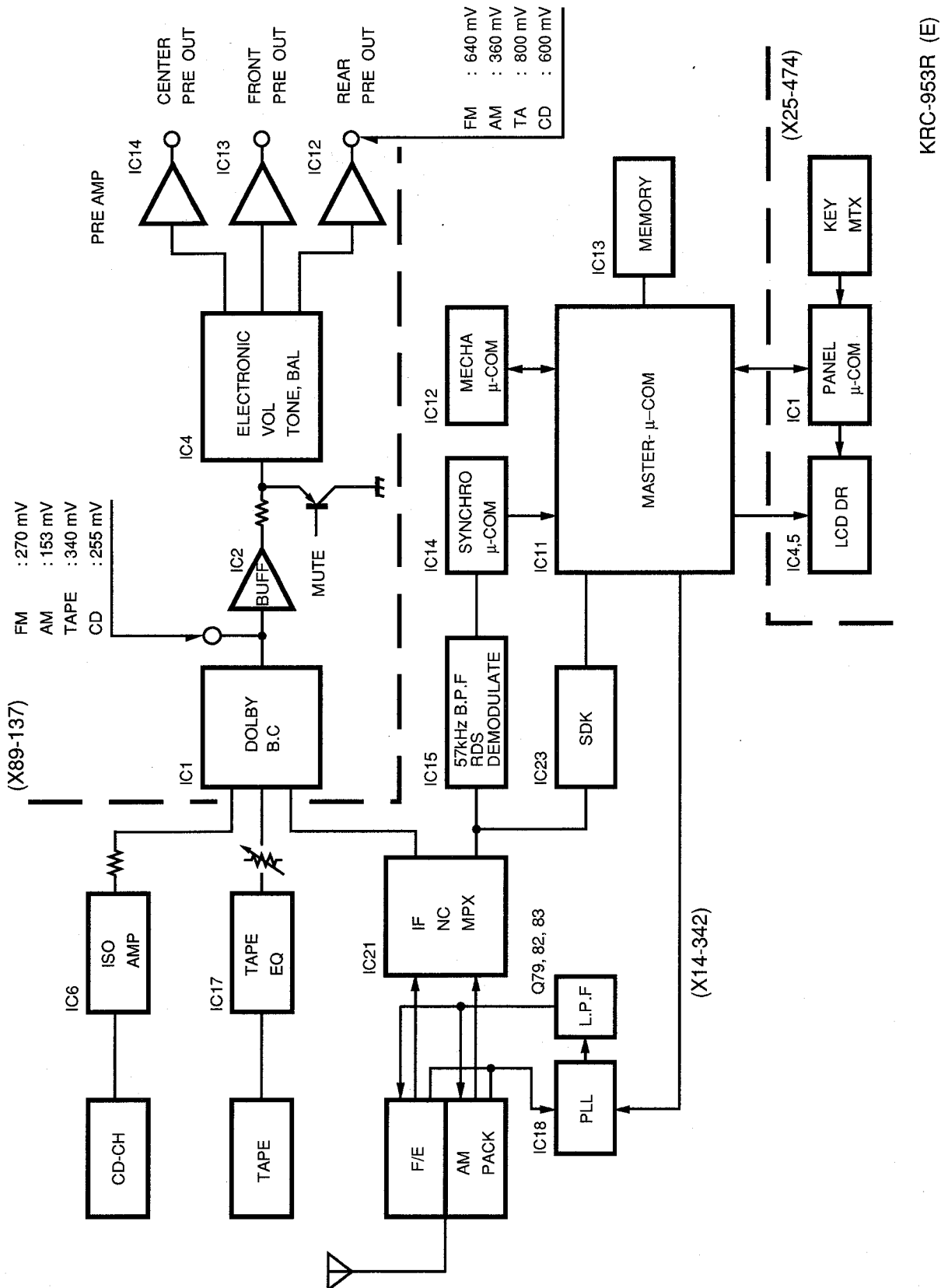
Top cover assembly

1. Insert the sub panel tabs into the top cover holes accordingly ①.
2. While pressing the top cover toward the front, align the end of top cover and the rear panel ②.
3. Fix the screw ③.



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BLOCK & LEVEL DIAGRAM



KRC-953R (E)

CIRCUIT DESCRIPTION

Ref. No.	Device Name	Purpose, Function	Operation, Condition, Compatibility
IC22	TC4S66F	Analog SW	Switches composite signal off during high-speed search.
IC23	TDA1579T	SDK IC	Detects SK and Dk from composite signal.
IC24	NJM4565M	Buffer	Input buffer for RDS H IC and SDK IC, and also BPF for BK.
Q1		8 V AVR	8 V circuitry power supply.
Q2		8 V SW	8 V power ON/OFF switch.
Q3, Q4		5 V AVR	5 V power supply for digital circuitry.
Q5, Q6		11 V AVR	11 V power supply for illumination circuitry.
Q7, Q8		11 V AVR SW	Switches power for illumination circuitry.
Q9 ~ 11		Data voltage shifter	As electronic volume data line is based on ± 5 V operation, data is sent by shifting "L" data to -5 V.
Q12, 13		Source SW	Switch source between tuner, cassette deck and CD-CH.
Q14, 15		Dolby SW	Switch Dolby NR to OFF, B and C.
Q18		High-speed muting driver	
Q19		Muting driver	Muting driver with a time constant.
Q20		Muting SW	Muting switch which turns Q19 ON/OFF (for muting operation with CD-CH/resetting).
Q21		DIM SW	Dimmer switch, to μ -COM.
Q22		P-ON 5 V driver	Driver of 5 V line supplied when power is turned ON.
Q23		P-ON 5 V SW	Power ON/OFF switch (to Acc line, 8 V AVR and P-ON +5 V).
Q24 ~ 26		Reset driver SW	When reset is applied, "H" is sent from panel to reset μ -COM and CD-CH.
Q27		BU detect SW	To μ -COM.
Q28		Acc detect SW	To μ -COM.
Q29		Motor +B driver	Mechanism main motor driver.
Q30		Motor +B SW	Motor driver ON/OFF switch.
Q31, 32		Reel pulse	Reel pulse signal buffer.
Q35		LPF power SW	Power switch for Vt LPF from Acc line.
Q36		Acc line SW	Turns Acc line ON when power is turned ON.
Q41 ~ 43		CD control SW	Turns data CLK line OFF in other cases than CD-CH control.
Q44		CD control buffer	To CD-CH.
Q45		REQ buffer	To CD-CH.
Q46		CE buffer	Buffer which inverts CE from panel μ -COM.
Q47		ILLUM. amber SW	When amber is selected, switched ON to turn series resistors for DIM ON.
Q48		DIM SW	OFF when dimmering, normally ON.
Q49		ILLUM. amber driver	
Q50		ILLUM. green driver	
Q51 ~ 52		Panel ON 5 V	When panel is ON, +5 V is supplied to panel based on μ -COM instruction.
Q53, 62		Sub-motor AVR	Supply power to sub-motor driver IC.
Q54		Panel detach SW	When panel is detached, turned ON to ground the potential of panel +5 V line.
Q61		FM ON +5 V SW	+5 V power for RDS μ -COM and demodulator IC. Supplies +5 V during FM reception only.
Q64		Sub-motor kick SW	Changes sub-motor voltage supply depending on normal and kick operations.
Q65		EQ muting SW	
Q66, 67		Time constant SW	Switch time constant for music detection depending on play and FF modes.
Q68		AFC SW	Open when AFC is OFF.
Q70		S meter buffer	For temperature compensation of S meter buffer.

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CIRCUIT DESCRIPTION

Ref. No.	Device Name	Purpose, Function	Operation, Condition, Compatibility
Q71		AM-SD SW	
Q72, 73		CIRC SW	
Q74		AM AGC SW	
Q75		MW-LW SW	
Q76		FM + B SW	
Q77		AM + B SW	
Q78		FM LOC SW	
Q79		Vt LPF	For AM with E type, or for FM and AM with K type.
Q80		LPF SW	
Q81		Vt time constant SW	OFF during search.
Q82, 83		Vt LPF	For FM.
Q91		IF Amp.	
Q92		FM MUTE SW	
Q93		S meter buffer	
Q94		AFC SW	Switches time constant during AFC.

UNIT (X89-1372-70)

Ref. No.	Device Name	Purpose, Function	Operation, Condition, Compatibility
IC1	HA12161FP	Dolby IC	Switches between Dolby OFF, B, C and Source (Tape, Tuner, CH).
IC2	NJM4580ED	Buffer	Buffer before input to electronic volume control.
IC4	TC9233FK	Electronic volume	Controls volume, balance, tone and fader.
IC5, 6	NJM4580ED	Buffer	Buffer for electronic volume control.
IC7 ~ 10	NJM4580ED	Tone buffer	Tone EQ of electronic volume control.
IC11	NJM4565MD	0-cross buffer	Zero-cross buffer for electronic volume control.
IC12	REAR-PRE Amp.		
IC13	FRONT-PRE Amp.		
IC14	CENTER-PRE Amp.		
IC15, 16	NJM4565MD	Ext. muting buffer	
Q1, 2		MUTE driver	
Q11 ~ 13		P.CON OUT driver	Power control driver, current protection.
Q14		P.CON driver SW	
Q15		EXT. MUTE driver SW	

UNIT (X25-4742-70)

Ref. No.	Device Name	Purpose, Function	Operation, Condition, Compatibility
IC1	75004GB-773-3B4	Panel μ -COM	Key sense, remote control light sensor, rotary encoder reading, and communications with master μ -COM.
IC2	PST572DMT	Reset IC	For panel μ -COM reset.
IC3	RS-21	Remote control light sensor	
IC4,5	LC7582A	LCD driver	
Q1		INH driver	Drives LCD driver IC INH signal and remote control light sensor power.
Q2		INH driver SW	
Q3, 4		Reverse current prevention	Rectifier transistors to allow implementation of DIM and GND with a single line.
Q5		Reset SW	Resets panel μ -COM according to external reset.

KRC-953R

CIRCUIT DESCRIPTION

1. Outline

The KRC-953R and KRC-940 use three microcomputers: the panel microcomputer, cassette mechanism microcomputer and system microcomputer. The panel microcomputer is used to input key signals, remote control signals and rotary encoder signals. The cassette mechanism microcomputer is used to control the cassette mechanism. The system microcomputer is used to control the tuner, CD-CH, display, electronic volume controller and power supply, and also communicates with the panel and cassette mechanism microcomputer.

Model using microcomputers: KRC-953R

Destination: E type only

Model using microcomputers: KRC-940

Destination: K type, M type

Panel microcomputer

- Chip name: μ PD75004GB-XXX-3B4

Manufacturer: NEC

Cassette mechanism microcomputer

- Chip name: μ PD75004GB-XXX-3B4

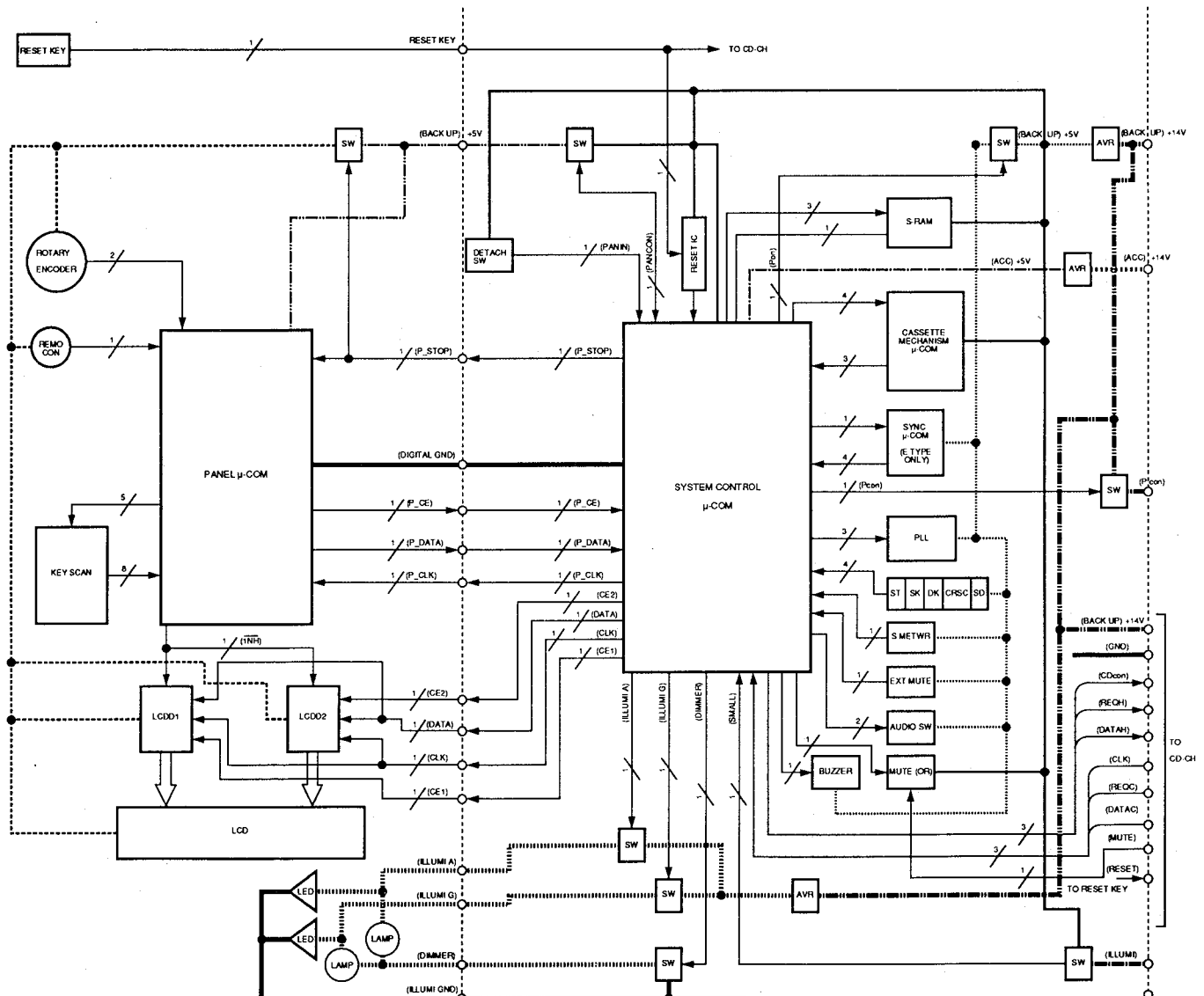
Manufacturer: NEC

System microcomputer

- Chip name: CXP81316-XXXQ

Manufacturer: Sony

2. Block Diagram



KRC-953R

CIRCUIT DESCRIPTION

3. Details of Panel Microcomputer

• Outline

This microcomputer is mounted on the panel of the 1992 model with detachable panel specifications. It sends the inputs from the keys, remote control data and rotary encoder

data to the system microcomputer as the command data. The system microcomputer operates according to the input commands.

• Terminals required for the control

① System microcomputer

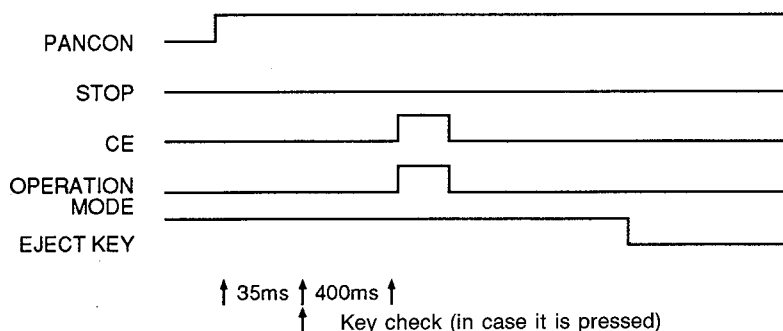
Name	I/O	Contents
PANCON	O	Panel power supply terminal. When the panel is attached, supplies power, causing the initial start of the panel μ -COM. Interlocked with RESET terminal of panel μ -COM.
PANIN	I	Terminal detecting if the panel is attached to the unit. If it is not attached, forces PANCON to OFF.
P-STOP	O	Stop request to panel μ -COM. When POWER SW or Acc is OFF, puts the panel μ -COM to stop status in order to suppress back-up current. As panel μ -COM controls LCD driver INHIBIT at the rise of this terminal, the display disappears for 1 second any time this terminal falls. Therefore, to deal with terminal contact failure, this terminal is provided with a hardware time constant of 20 to 30 ms. The system μ -COM should consider this time period and, in case this terminal falls, should rise it after waiting for the time period to ensure the fall.
P_CE	I	Key data send request from panel μ -COM.
P_CLK	O	Clock output to panel μ -COM.
P_DATA	I	Key data input from panel μ COM.

② Panel microcomputer

Name	I/O	Contents
RESET	I	Every time system μ -COM turns PANCON ON, panel μ -COM is reset and performs initial start operation. At this time, it checks if the "EJECT" key is ON and sends a test mode code.
STOP	I	Stop request input which puts panel μ -COM immediately in the stop status. Even in this status, key codes of some specific keys are transferred.
P_CE	O	Key data send request to system μ -COM.
P_CLK	I	Clock input from system μ -COM.
P_DATA	O	Key data output to system μ COM.

• Timing charts

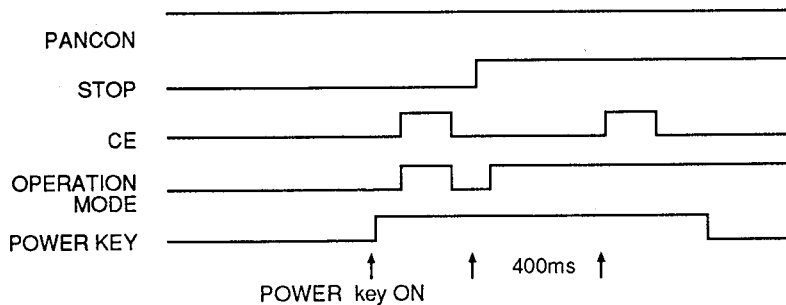
① Reset by panel RESET switch



When panel microcomputer is reset, whether the TAPE (Source) and EJECT key are ON or not is checked in initial processing. Send a "51H" (EJECT) and/or "52H" (TAPE) if one of them is pressed, and sends "50H" if none of them is pressed.

CIRCUIT DESCRIPTION

② When POWER Key is pressed ON in stop status

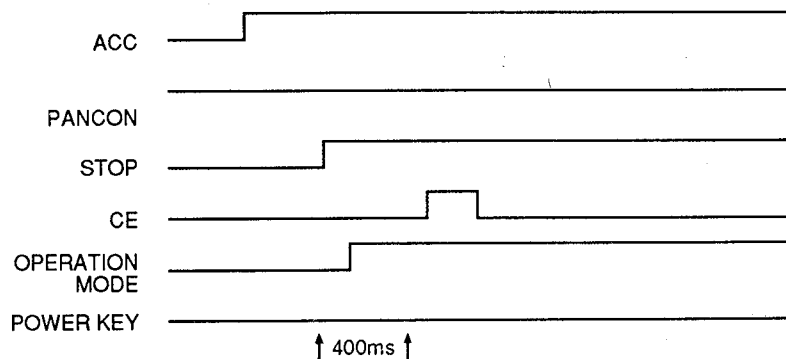


When POWER key is pressed ON, one of the three kinds of key codes shown below is sent. The system microcomputer performs power ON operation according to the key code sent to it.

- I. In case 1 + 5 are also pressed simultaneously: "61H" Destination change
- II. In case 2 + 3 are also pressed simultaneously: "62H" Not used
- III. In other case than I and II above: "60H"

At the timing marked *, the same operation as ③ occurs. The system microcomputer thus has to ignore it.

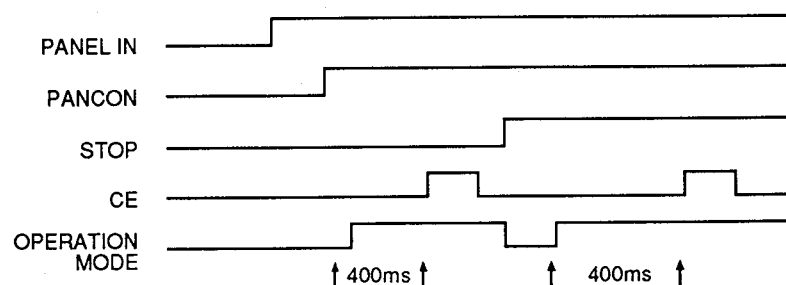
③ When Acc is turned ON after Acc OFF in last power ON status



When POWER key is pressed ON, one of the three kinds of key codes shown below is sent. The system microcomputer performs power ON operation according to the key code sent to it.

- I. In case 1 + 5 are also pressed simultaneously: "61H" Destination change
- II. In case 2 + 3 are also pressed simultaneously: "62H" Not used
- III. In other case than I and II above: "60H"

④ When panel is attached after last power ON status has been changed to power OFF status due to panel detaching. In this case, last power ON status is stored in memory and operation is started up when TUNER is turned ON.

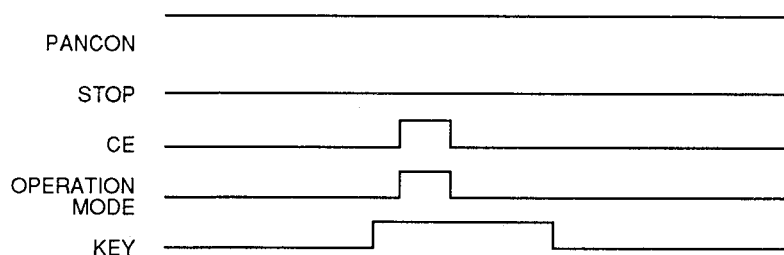


As panel microcomputer is incapable of judging between start due to reset and start due to panel attaching, it performs processing of ① and ③. As a result, system microcomputer performs processing ① (ignoring key command) then performs ③ (ignoring key command).

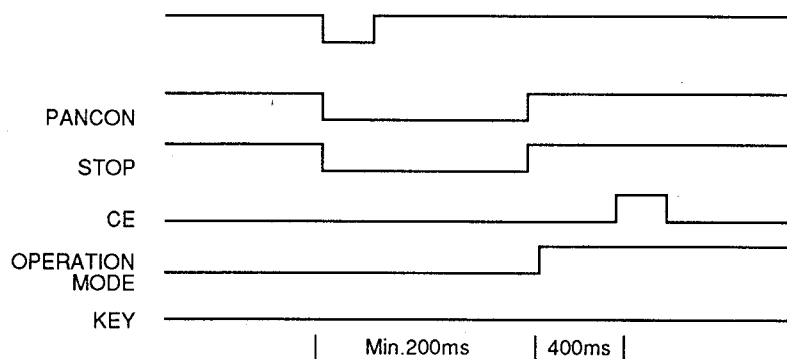
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CIRCUIT DESCRIPTION

- ⑤ When EJECT, TUNER, TAPE or CD-CH key is pressed in stop status



- ⑥ Timing in case of momentary power failure



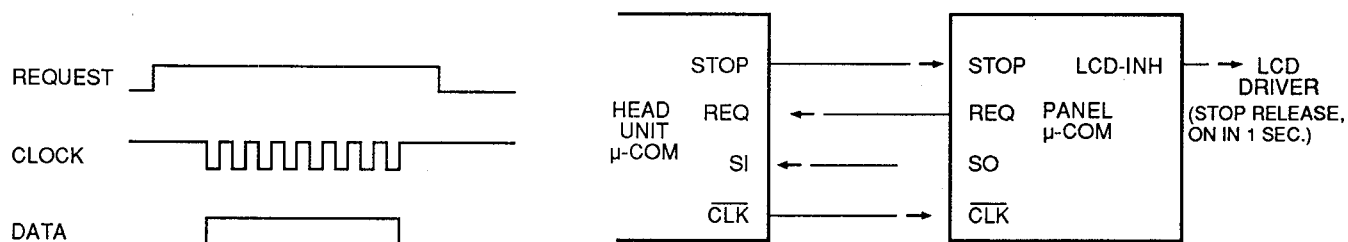
In case of momentary power failure, time constant of hardware intervenes with POWER and STOP terminals of panel unit. Therefore, when PANCON or STOP is fallen, the status should be maintained for 200 ms or more.

- * Communication method (3-wire, unidirectional)

The head unit outputs CLOCK (8 bits) at the rise of REQUEST from panel microcomputer. The data input to the head unit at this time becomes the key data.

If CLOCK is not input within 100 ms after rising REQUEST, panel microcomputer identifies communication error, falls REQUEST and retries communication.

While STOP is Low, the retry is repeated up to 5 times per key input, and stop status is entered again after it. Panel microcomputer uses serial port. DATA is input at the rise of CLOCK.



CIRCUIT DESCRIPTION

• Panel Detach/Attach Microcomputer Matrix and Specifications for 1992

KEY SCAN	KS4 P50 (11pin)	KS3 P43 (13pin)	KS2 P42 (14pin)	KS1 P41 (15pin)	KS0 P40 (16pin)
KEY RETURN					
KRO (with built-in pull-up R) P60 (7pin)	POWER 90H	TONE 88H	AM 80H	① (AUTO) 78H	PRESET ④ KEY CODE: 70H
KR1 (with built-in pull-up R) P61 (6pin)	EJECT 91H	BAL/FAD 89H	FM 81H	② (LOCAL) 79H	PRESET ② 71H
KR2 (with built-in pull-up R) P62 (5pin)	EJECT 92H	VOL ATT 8AH	DOWN (Simultaneous press) 82H	③ (CLOCK) (Simultaneous press) 7AH	PRESET ③ 72H
KR3 (with built-in pull-up R) P63 (4pin)	TAPE 93H	OP10 8BH	UP (Simultaneous press) 83H	④ (T1) 7BH	PRESET ④ 73H
KR4 (with built-in pull-up R) P70 (3pin)	CD-CH 94H	OP11 8CH	PRESET ⑥ 84H	⑤ (RDS) 7CH	PRESET ⑤ *1 74H
KR5 (with built-in pull-up R) P71 (2pin)	OPC *2 95H	OP9 8DH	OP6 85H	OP3 7DH	OP0 75H
KR6 (with built-in pull-up R) P72 (1pin)	OPD 96H	OPA 8EH	OP7 86H	OP4 7EH	OP1 76H
KR7 (with built-in pull-up R) P73 (4pin)	OPE 97H	OPB 8FH	OP8 87H	OP5 7FH	OP2 77H

All pin Nos. refer to flat package.

- * Even during execution of STOP instruction to panel microcomputer, STOP for the 8 pins assigned to KS4 is released at the moment the key is turned ON, and the key code is sent. This allows system microcomputer to be released from power OFF status.
- * As for the remote control codes, key codes from 00H to 1FH are transferred provided that the valid custom code is input.
- * Other key codes

30H	Transferred when the key the key-ON code of which was sent by pressing it is released.
31H	Transferred when all remote control keys are released. In case multiple keys are pressed simultaneously, the next transmission may occur without this code.
40H	When ③ + UP key is pressed simultaneously. (Used in case clock adjustment function is provided)
41H	When ③ + DOWN key is pressed simultaneously. (Used in case clock adjustment function is provided)
42H	When ③ + key is released (or in inverse case). (Used in case clock adjustment function is provided)
50H	When EJECT key is not pressed in initial processing.
51H	When EJECT key is pressed in initial processing (Test mode No. 1).
52H	When TAPE key is pressed in initial processing (Test mode No. 1).
60H	When stop status is released, or when POWER key is pressed ON while neither ① + ⑤ or ② + ③ is pressed.
61H	When stop status is released, or when POWER Key is pressed ON while ① + ⑤ is pressed. (Destination switching)
62H	When stop status is released, or when POWER Key is pressed ON while ② + ③ is pressed. (Not used)
68H	When rotary volume is increased (transferred at every positive-going edge at minimum interval of 4 ms).
69H	When rotaru volume is decreased (transferred at every positive-going edge at minimum interval of 4 ms).
OANH	During initial processing, transfers statuses of SEL 0 to 3 to system μ -COM as "N" (0H-0FH).

- *1: A diode should be inserted to prevent malfunction when multiple keys are pressed simultaneously. (In case destination switching is done with system microcomputer)
- *2: This key must be used if the specifications allows to start up operation by pressing TI or PRP key while power is OFF.

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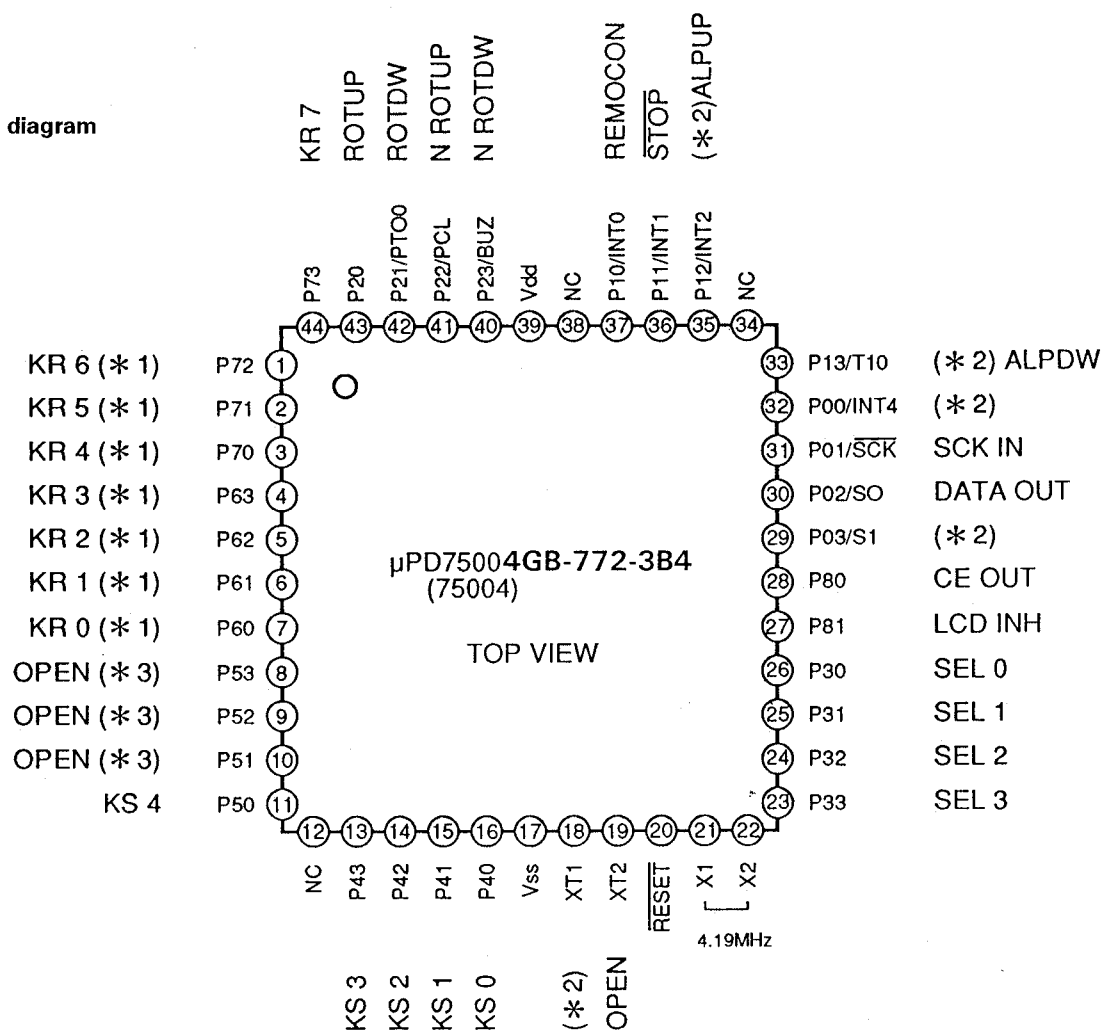
CIRUIT DESCRIPTION

IC1: 75004GB-772-3B4 (X25-4742-70)

Panel microcomputer

Model Name \ SEL	SEL 3 P33	SEL 2 P32	SEL 1 P31	SEL 0 P30
KRC-953R	PULL DOWN	PULL DOWN	PULL DOWN	PULL DOWN
KRC-940	PULL DOWN	PULL DOWN	PULL DOWN	PULL UP

Pin connection diagram



*1 : Software pull up
 *2 : Vss or Vdd
 *3 : Mask option pull up

CIRCUIT DESCRIPTION

Terminal Description (All pin Nos. refer to flat package.) μ PD75004GB-773-3B4

Pin. No	Name	I/O	Functions
1	KR6	I	Key Return 6 (Active Low), Internally pulled up. Program selection.
2	KR5	I	Key Return 5 (Active Low), Internally pulled up. Program selection.
3	KR4	I	Key Return 4 (Active Low), Internally pulled up. Program selection.
4	KR3	I	Key Return 3 (Active Low), Internally pulled up. Program selection.
5	KR2	I	Key Return 2 (Active Low), Internally pulled up. Program selection.
6	KR1	I	Key Return 1 (Active Low), Internally pulled up. Program selection.
7	KR0	I	Key Return 0 (Active Low), Internally pulled up. Program selection.
8		I	Unused terminal. Open. Internally pulled up. Mask option.
9		I	Unused terminal. Open. Internally pulled up. Mask option.
10		I	Unused terminal. Open. Internally pulled up. Mast option.
11	KS4	O	Key Scan 4 (Active Low). Open drain terminal (diode not required).
12	NC	—	No connection. Open.
13	KS3	O	Key Scan 3 (Active Low). Open drain terminal (diode not required).
14	KS2	O	Key Scan 2 (Active Low). Open drain terminal (diode not required).
15	KS1	O	Key Scan 1 (Active Low). Open drain terminal (diode not required).
16	KS0	O	Key Scan 0 (Active Low). Open drain terminal (diode not required).
17	Vss	—	μ COM GND.
18	XT1	—	Not used. Connected to Vdd or Vss.
19	XT2	—	Not used. Open.
20	RESET	I	Reset input.
21	X1	—	Ceramic oscillator connection. (4.19 MHz)
22	X2	—	Ceramic oscillator connection. (4.19 MHz)
23	SEL3	I	Selected function confirmation terminal (selection according to pull-up/pull-down). * Refer to pin layout.
24	SEL2	I	Selected function confirmation terminal (selection according to pull-up/pull-down). * Refer to pin layout.
25	SEL1	I	Selected function confirmation terminal (selection according to pull-up/pull-down). * Refer to pin layout.
26	SEL0	I	Selected function confirmation terminal (selection according to pull-up/pull-down). * Refer to pin layout.
27	LCDINH	O	LCD driver inhibit terminal.
28	P_CE	O	Key data transfer request.
29		I	Not used. Connected to Vdd or Vss
30	P_DATA	O	Key data line.
31	P_CLK	I	Key data clock. (Max. 1 MHz)
32	NARTDW	I	Mfd. by Alps Electric. Phase type double-edge system. Rotary encoder input (Down).
33	NARTUP	I	Mfd. by Alps Electric. Phase type double-edge system. Rotary encoder input (Up)
34	NC	—	No connection. Open.
35		I	Not used. Connected to Vdd or Vss.
36	P_STOP	I	Stop request (oscillation stop).
37	REMO	I	Remote control data input.
38	NC	—	No connection. Open.
39	Vdd	—	Power supply terminal. 5 V.
40	NRTDW	I	Mfd. by Alps Electric. Phase type double edge system. Rotary encoder input (Down).
41	NRTUP	I	Mfd. by Alps Electric. Phase type double-edge system. Rotary encoder input (Up).
42	RTDW	I	Mfd. by Matsushita. Rotation direction pulse input type. Rotary encoder input (Down).
43	RTUP	I	Mfd. by Matsushita. Rotation direction pulse input type. Rotary encoder input (Up).
44	KR7	I	Key Return 7 (Active Low), Internally pulled up. Program selection.

KRC-953R

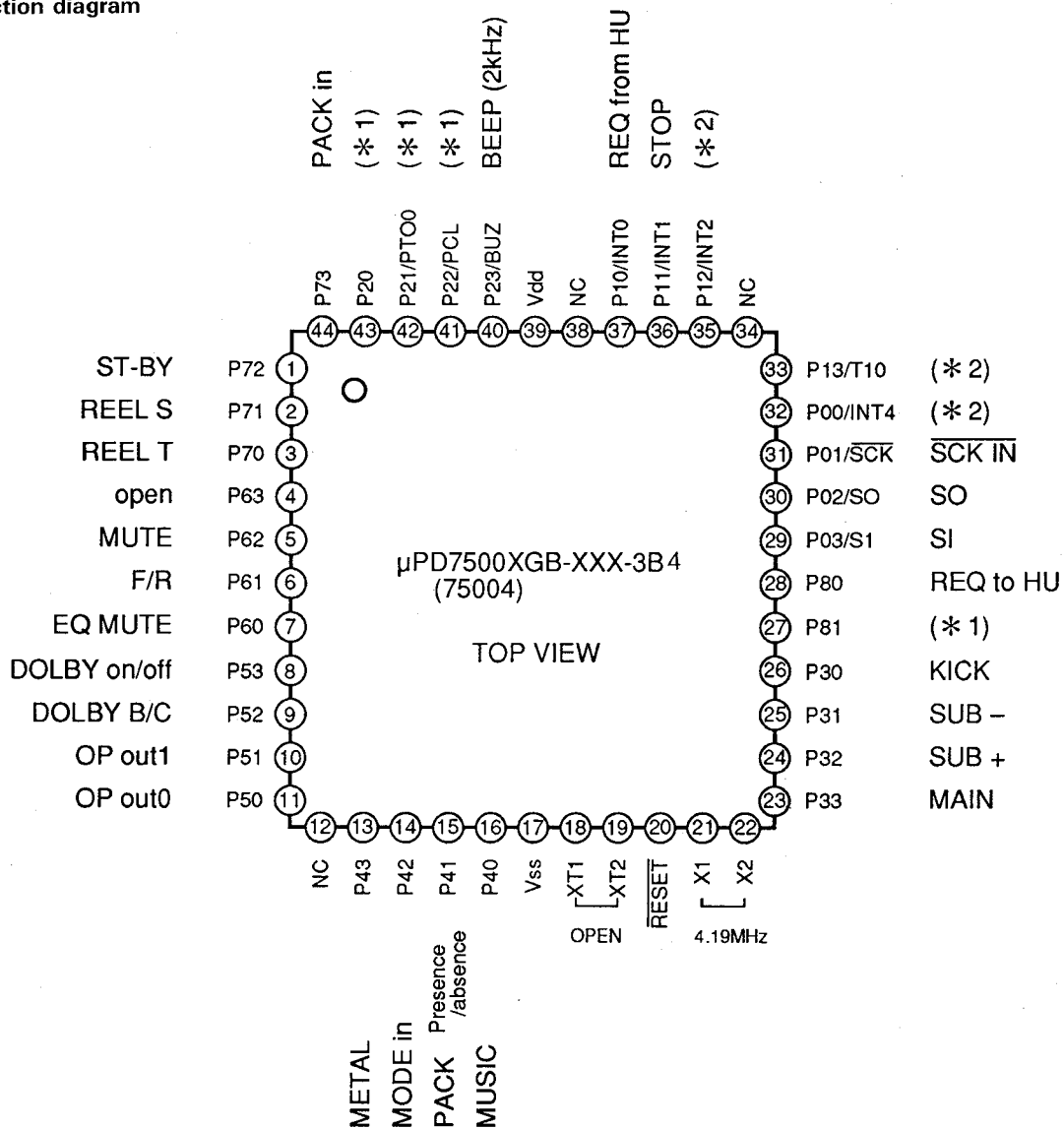
CIRCUIT DESCRIPTION

4. Details of Cassette Mechanism Microcomputer

IC12: 75004GB-774-3B4 (X14-3422-70)

Mechanism microcomputer

Pin connection diagram



*1 : pull up or pull down

*2 : Vss or Vdd

CIRCUIT DESCRIPTION

Terminal Description (All pin Nos. refer to flat package.) μ PD75004GB-772-3B4

Pin No.	Name	I/O	Functions
1	ST-BY	I	Mechanism stand-by switch input.
2	REEL S	I	Reel pulse, supply side input.
3	REEL T	I	Reel pulse, takeup side input.
4	OPEN	O	Internally pulled up. Program selection.
5	MUTE	O	Muting output. (Not used)
6	FWD/REV	O	Equalizer amplifier FWD/REV switching output.
7	EQ MUTE	O	Equalizer muting output. ("H" during play)
8	DOLBY on/off	O	Dolby output. "H" ← DOLBY off "H" ← DOLBY B "L" ← DOLBY C
9	DOLBY B/C	O	Dolby output. "H" "L" "H"
10	OP OUT1	O	Not used. Open.
11	OP OUT0	O	Not used. Open.
12	NC	—	No connection. Open.
13	METAL	I	Metal tape detection. ("L" = METAL)
14	MODEin	I	Mode pulse detection. ("L" = MODE)
15	PACK PRESENCE	I	PACK PRESENCE Pack presence/absence detection. ("H" = Pack present)
16	MUSIC	I	Music detection for music search. ("H" = Blank)
17	Vss	—	μ -COM GND.
18	XT1	—	Not used. Connected to Vdd or Vss.
19	XT2	—	Not used. Open.
20	RESET	I	Reset input.
21	X1	—	Ceramic oscillator connection. (4.19 MHz)
22	X2	—	Ceramic oscillator connection. (4.19 MHz)
23	MAIN	O	Main motor output.
24	SUB +	O	Sub-motor forward output.
25	SUB -	O	Sub-motor reverse output.
26	KICK	O	Kick output for gear mesh disengagement.
27		O	Not used. Pull-up or pull-down.
28	REQ to HU	O	Communication request to head unit.
29	SI	I	Serial data input line.
30	SO	O	Serial data output line.
31	CLK	I	Serial clock input line.
32		I	Not used. Connected to Vdd or Vss.
33		I	Not used. Connected to Vdd or Vss.
34	NC	—	No connection. Open.
35		I	Not used. Connected to Vdd or Vss.
36	P_STOP	I	Stop request (oscillation stop).
37	RQ from HU	I	Communication request from head unit.
38	NC	—	No connection. Open.
39	Vdd	—	Power supply terminal.
40	BEEP	O	Beep output. (2 kHz)
41		O	Not used. Pull-up or pull-down.
42		O	Not used. Pull-up or pull-down.
43		O	Not used. Pull-up or pull-down.
44	PACK in	I	Pack-in switch input.

KRC-953R

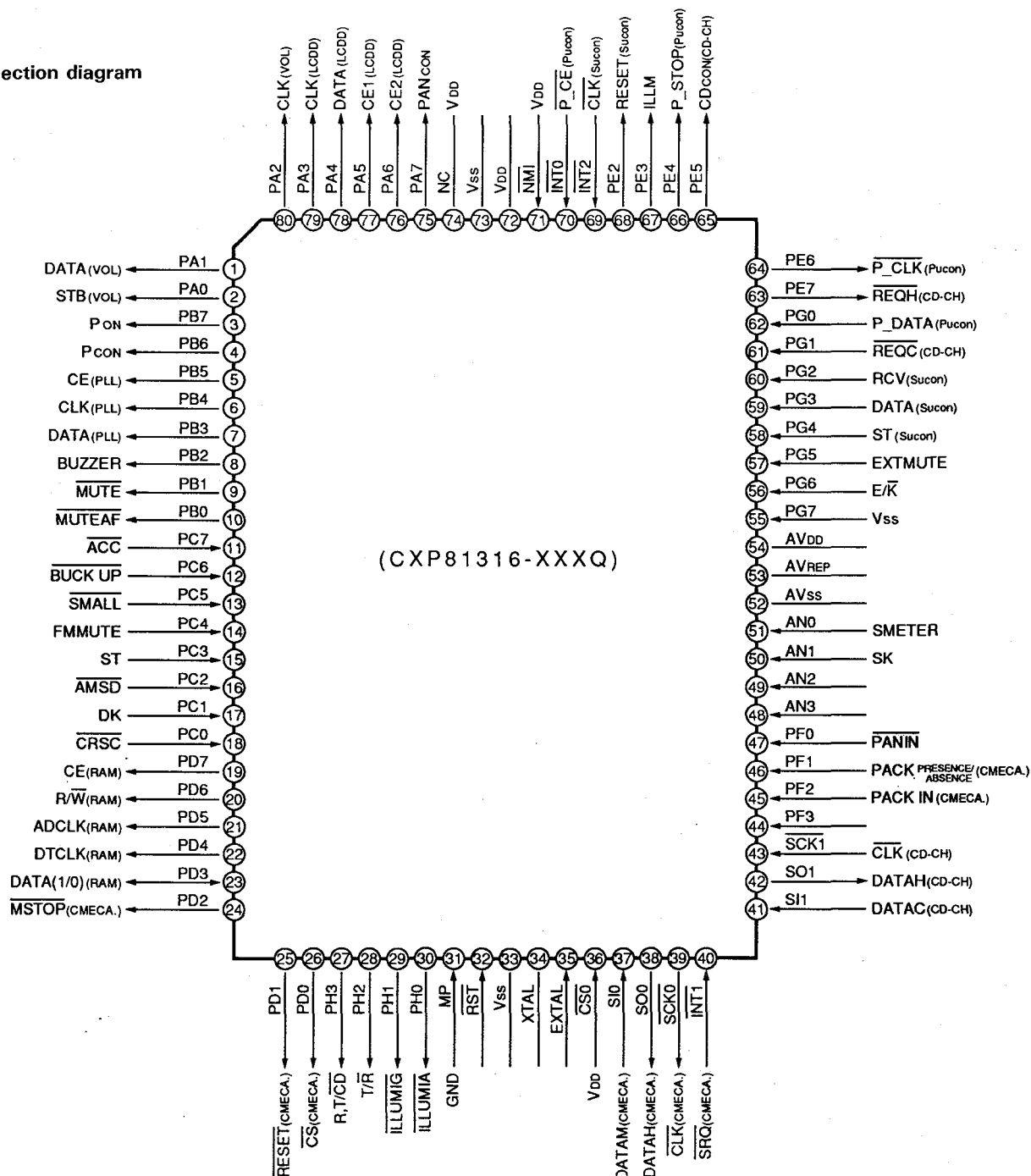
CIRCUIT DESCRIPTION

5. Details of Systrem Microcomputer

IC11: CXP81316-327Q (X14-3422-70)

Master microcomputer

Pin connection diagram



CIRCUIT DESCRIPTION

System Microcomputer Terminal Description

[CMOS(O)]: For complementary output only.

[CMOS(O)A]: For complementary output only. (Large current: 12 mA)

[OD(O)AV]: For open drain output only. (Large current: 12 mA, Medium withstanding voltage: 12 V)

[CMOS(I/O)]: Complementary output/input.

[BIN]: Buffer input.

[SIN]: Schmitt input.

[A/D]: A/D converter input.

Pin No.	PORT	Terminal Name	I/O	Active	Function	I/O Circuit	When Reset	Stand-by
1	PA1	DATA (VOL)	O	—	Data to electronic volume.	[COMS (O)]	Hi-z	L
2	PA0	STB	O	H	Strobe to electronic volume.	[COMS (O)]	Hi-Z	L
3	PB7	Pon	O	H	(+B) control of surrounding circuitry of C mechanism μ -COM.	[COMS (O)]	Hi-Z	L
4	PB6	Pcon	O	H	Control of amplifiers, antenna, etc.	[COMS (O)]	Hi-Z	L
5	PB5	CE (PLL)	O	H	PLL Chip Enable terminal.	[COMS (O)]	Hi-Z	L
6	PB4	CLK (PLL)	O	H	PLL clock terminal ($\bar{f}$ latch).	[COMS (O)]	Hi-Z	L
7	PB3	DATA (PLL)	O	—	PLL data terminal.	[COMS (O)]	Hi-Z	L
8	PB2	BUZZER	O	H	Buzzer control terminal.	[COMS (O)]	Hi-Z	L
9	PB1	MUTE	O	L	Muting control terminal.	[COMS (O)]	Hi-Z	L
10	PB0	MUTEAF	O	L	AF search muting control terminal.	[COMS (O)]	Hi-Z	H
11	PC7	Acc	I	L	Acc OFF detection terminal.	[BIN]	Hi-Z	—
12	PC6	BUCKUP	I	L	Back-up OFF detection terminal.	[BIN]	Hi-Z	—
13	PC5	SMALL	I	L	Small ON detection terminal.	[BIN]	Hi-Z	—
14	PC4	FMMUTE	I	H	Band muting (FM).	[BIN]	Hi-Z	—
15	PC3	ST	I	H	Stereo detection terminal.	[BIN]	Hi-Z	—
16	PC2	AMSD	I	L	AMSD.	[IBN]	Hi-Z	—
17	PC1	DK	I	H	DK detection terminal.	[BIN]	Hi-Z	—
18	PC0	CRSC	I	L	Noise detection terminal.	[BIN]	Hi-Z	—
19	PD7	DE1 (RAM)	O	H	S-RAM Chip Enable terminal.	[COMS (O) A]	Hi-Z	L
20	PD6	R/W (RAM)	O	H	S-RAM R/M control terminal.	[COMS (O) A]	Hi-Z	L
21	PD5	ADCLK (RAM)	O	O	S-RAM address clock terminal. ($\bar{f}$ latch).	[COMS (O) A]	Hi-Z	L
22	PD4	DTCLK (RAM)	O	H	S-RAM data clock terminal ($\bar{f}$ latch)	[COMS (O) A]	Hi-Z	L
23	PD	DATA I/O (RAM)	I/O	—	S-RAM data (I/O) terminal.	[COMS (O) A]	Hi-Z	L
24	PD2	MSTOP (C MECA)	O	L	Stop request to cassette mechanism μ -COM.	[COMS (O) A]	Hi-Z	L
25	PD1	RESET (C MECA)	O	L	Reset to cassette mechanism μ -COM.	[COM (O) A]	Hi-Z	H
26	PD0	CS (C MECA)	O	L	Chip Select request to cassette mechanism μ -COM.	[COM (O) A]	Hi-Z	H
27	PH3	R, T/CD	O	—	Source switching terminal between TAPE/RADIO, CD-CH.	[OD (O) AV]	Open	L
28	PH2	T/R	O	—	Source switching terminal between RADIO/CD-CH.	[OD (O) AV]	Open	L
29	PH1	ILLUMIG	O	L	Green illumination power ON/OFF control terminal.	[OD (O) AV]	Open	—
30	PH0	ILLUMIA	O	L	Amber illumination power ON/OFF control terminal.	[OD (O) AV]	Open	—
31	MP	—	—	—	Use inhibited. (To GND)	[BIN]	Hi-Z	—
32	RST	RESET	I	L	Hardware reset terminal.	[SIN]	Low level	—
33	Vss	Vss	—	—	GND terminal.	—	—	—
34	XTAL	XTAL	—	—	Main clock terminal.	—	Oscillation	—
35	EXTAL	EXTASL	I	—	Main clock input terminal.	—	Oscillation	—
36	CSO	—	I	$\bar{f}$	Not used. (To Vdd)	[SIN]	Hi-Z	—
37	SIO	DATAM (C MECA)	I	—	Data input from cassette mechanism μ -COM.	[SIN]	Hi-Z	—
38	SOO	DATAM (C MECA)	O	—	Data output to cassette mechanism μ -COM.	[COMS (O)]	Hi-Z	L
39	SCKO	CLK (C MECA)	O	—	Clock output to cassette mechanism μ -COM ($\bar{f}$ latch).	[COMS (O)]	Hi-Z	H

KRC-953R

CIRCUIT DESCRIPTION

Pin No.	PORT	Terminal Name	I/O	Active	Function	I/O Circuit	When Reset	Stand-by
40	INT1	CLK (C MECA)	I	$\overline{1}$	Request input from cassette mechanism -COM.	[SIN]	Hi-Z	—
41	SI1	DATAC (CD-CH)	I	—	Data input from CD-CH.	[SIN]	Hi-Z	—
42	SO1	DATAH (CD-CH)	O	—	Data output to CD-CH.	[COMS (0)]	Hi-Z	L
43	SCK1	CLK (CD-CH)	I	—	Clock input from CD-CH ($\overline{1}$ latch).	[SIN]	Hi-Z	—
44	PF3	—	I	—	Not used. (To GND)	[BIN]	Hi-Z	—
45	PF2	PACKIN	I	H	Tape pack-IN input terminal.	[BIN]	Hi-Z	—
46	PF1	PACK	I	H	PACK PRESENCE Tape pack presence/absence input terminal.	[BIN]	Hi-Z	—
47	PF0	PANIN	I	L	Panel attached switch input terminal.	[BIN]	Hi-Z	—
48	AN3	—	I	—	Not used. (To GND)	[A/D]	Hi-Z	—
49	AN2	—	I	Analog	Not used. (To GND)	[A/D]	Hi-Z	—
50	AN1	SK	I	Analog	SK detection terminal.	[A/D]	Hi-Z	—
51	AN0	SMETER	I	Analog	Signal meter input terminal.	[A/D]	Hi-Z	—
52	AVss	AVss	—	—	A/D converter GND terminal.	—	—	—
53	AVrep	AVrep	—	—	A/D converter reference voltage input terminal.	—	—	—
54	AVdd	AVdd	—	—	A/D converter positive power supply terminal.	—	—	—
55	PG7	—	I	—	Not used. (To GND)	[SIN]	Hi-Z	—
56	PG6	E/ $\overline{K}$	I	—	Destination input terminal. (E type/K type)	[SIN]	Hi-Z	H
57	PG5	EXTMUTE	I	H	External muting input terminal.	[SIN]	Hi-Z	—
58	PG4	ST (Sucon)	I	H	Start bit input from sync μ -COM.	[SIN]	Hi-Z	—
59	PG3	DATA (Sucon)	I	—	Data input from sync μ -COM.	[SIN]	Hi-Z	—
60	PG2	RCV (Sucon)	I	H	Sync detection input from sync μ -COM.	[SIN]	Hi-Z	—
61	PG1	REQC (CD-CH)	I	L	Request input from CD-CH.	[SIN]	Hi-Z	—
62	PG0	P_DATA (Pucon)	I	—	Data input from panel μ -COM.	[SIN]	Hi-Z	—
63	PE7	REQH (CD-CH)	O	L	Request output to CD-CH. High level	[COMS (0)]	High level	L
64	PE6	P_CLK (Pucon)	O	L	Clock output to panel u-COM ($\overline{1}$ latch).	[COMS (0)]	High level	L
65	PE5	CDcon (CD-CH)	O	H	CD-CH ON/OFF control terminal.	[COMS (0)]	Hi-Z	L
66	PE4	P_STOP (Pucon)	O	H	Stop request to output panel μ -COM.	[COMS (0)]	Hi-Z	L
67	PE3	ILLM	O	H	Illumination power control terminal.	[COMS (0)]	Hi-Z	—
68	PE2	RESET (Sucon)	O	H	Reset output to sync u-COM.	[COMS (0)]	Hi-Z	L
69	INT2	CLK (Sucon)	I	$\overline{1}$	Clock input from sync u-COM ($\overline{1}$ latch).	[SIN]	Hi-Z	—
70	INT0	P_CE (Pucon)	I	$\overline{1}$	Chip Enable input from panel μ -COM.	[SIN]	Hi-Z	—
71	NMI	NMI	I	$\overline{1}$	Non-maskable interrupt request terminal. (Vdd)	[SIN]	Hi-Z	—
72	Vdd	Vdd	—	—	Positive power supply terminal.	—	—	—
73	Vss	Vss	—	—	GND terminal.	—	—	—
74	NC	NC	—	—	Normal Close terminal. (To Vdd)	—	—	—
75	PA7	PANcon	O	H	Panel back-up +5 V ON/OFF control terminal.	[COMS (0)]	Hi-Z	L
76	PA6	CE2 (LCD)	O	H	Chip Enable (1) output to panel LCD.	[COMS (0)]	Hi-Z	L
77	PA5	CE1 (LCD)	O	H	Chip Enable (2) output to panel LCD.	[COMS (0)]	Hi-Z	L
78	PA4	DATA (LCD)	O	—	Data output to panel LCD.	[COMS (0)]	Hi-Z	L
79	PA3	CLK (LCD)	O	H	Clock output to panel LCD ($\overline{1}$ latch).	[COMS (0)]	Hi-Z	L
80	PA2	CLK (VOL)	O	H	Clock output to electronic volume ($\overline{1}$ latch).	[COMS (0)]	Hi-Z	L

Comment: Pins 58, 59, 60, 68 and 69 of the KRC-940 are not used and connected to GND.

CIRCUIT DESCRIPTION

Extension terminals of PLL (LC7218)

Pin No.	PORT	Terminal Name	I/O	Active	Function	I/O Circuit	When Reset	Stand-by
7	Not used		I		GND			
8	Not used		I		GND			
9	Not used		I		GND			
10		LO/DX	O	—	LOCAL/DX switching.			
11		AFC	O	L	Automatic frequency control (FM).			
12		AGC	O	L	Automatic gain control (AM).			
13		MW/LW	O	L	MW/LW switching.			
14		AM (+B)	O	L	AM (+B)			
15		FM (+B)	O	L	FM (+B)			

6. Test Mode

- How to enter test mode
 - Reset while holding the ▲ key depressed.
- How to quit test mode
 - Reset.
- Contents of test mode
 - During All OFF, all LCD indicators are displayed.
 - During Tuner mode, the input of 20 dB or more to the S meter and the operation of FM MUTE terminal are indicated as shown in the following table.

	KRC-953R	KRC-940
S METER input $\geq$ 20 dB	“REP” lights.	“REP” lights.
FM MUTE	“ □□ ” lights.	“ □□ B ” lights.

KRC-953R

MECHANISM DESCRIPTION

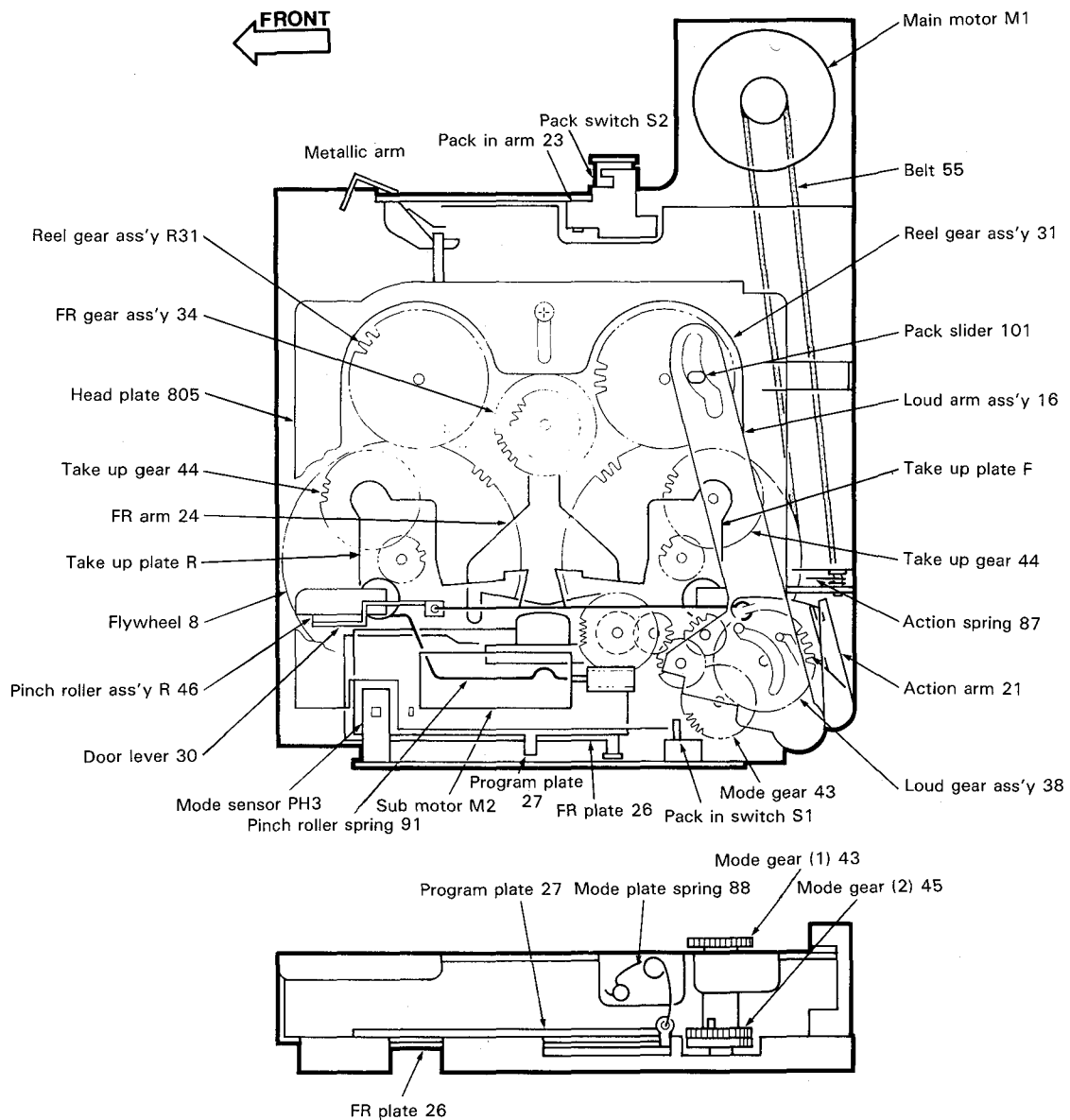
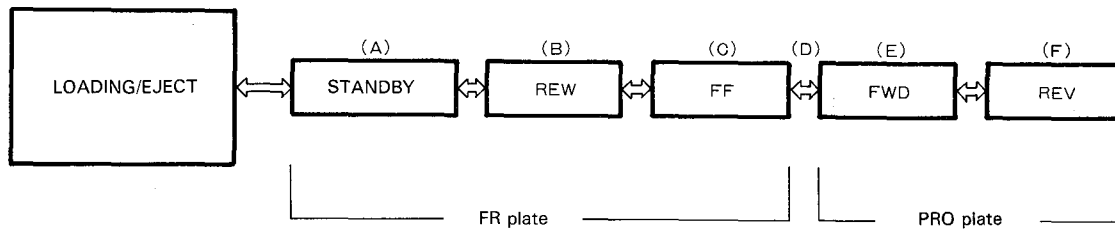


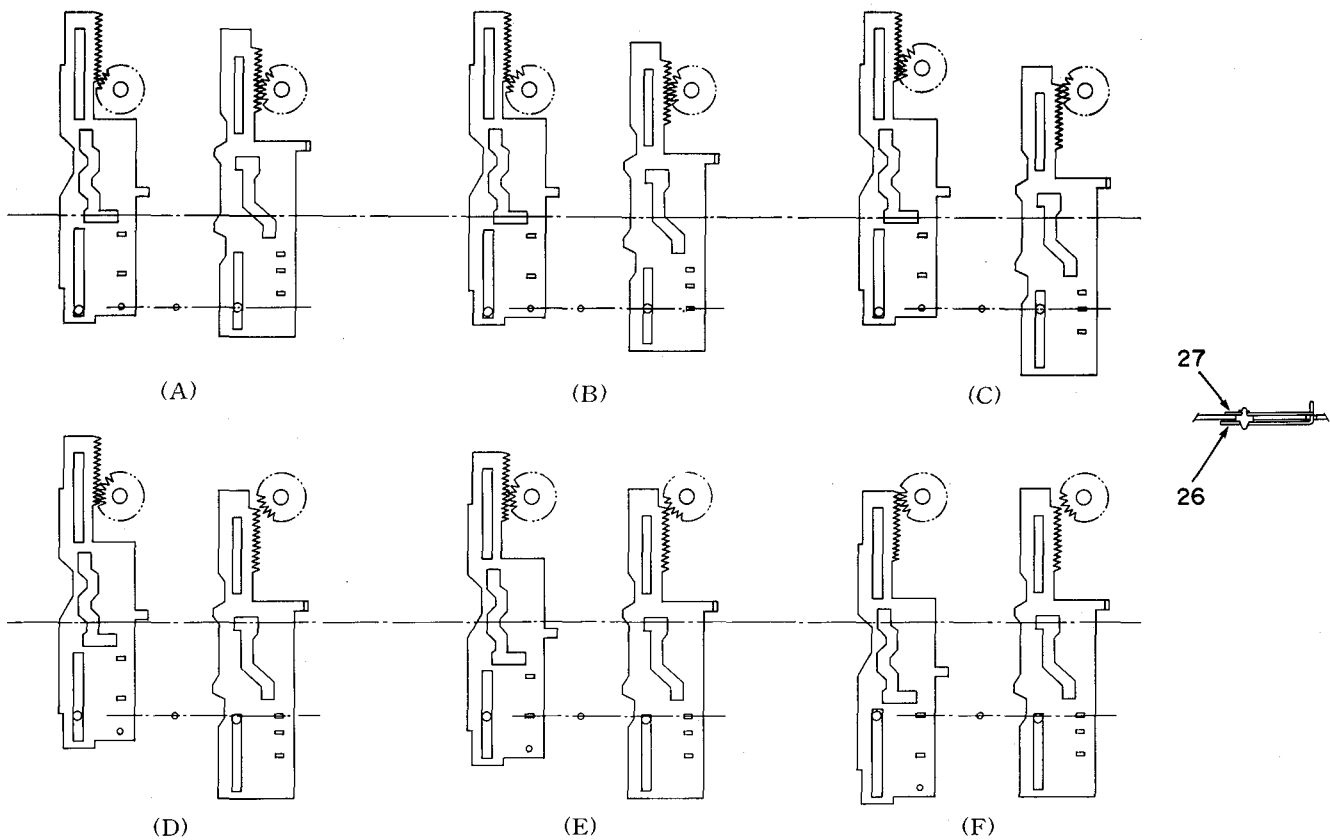
Fig. 1

Mechanism operation modes

Each mode undergoes the following sequence:



Each mode is determined by the positions of the FR and PRO plates.

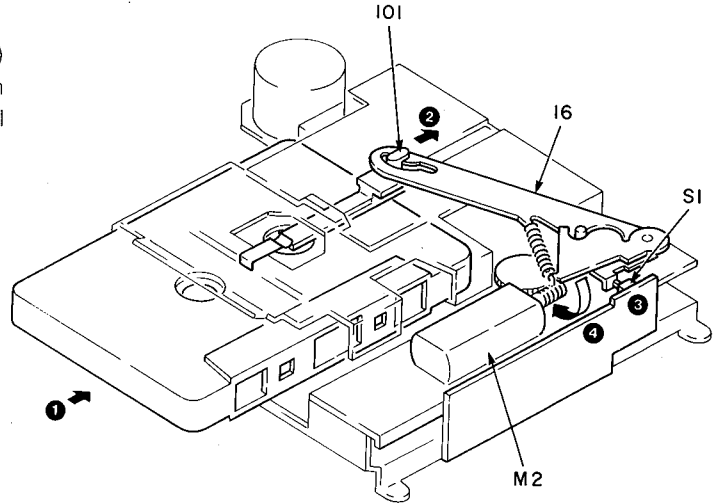


KRC-953R

MECHANISM DESCRIPTION

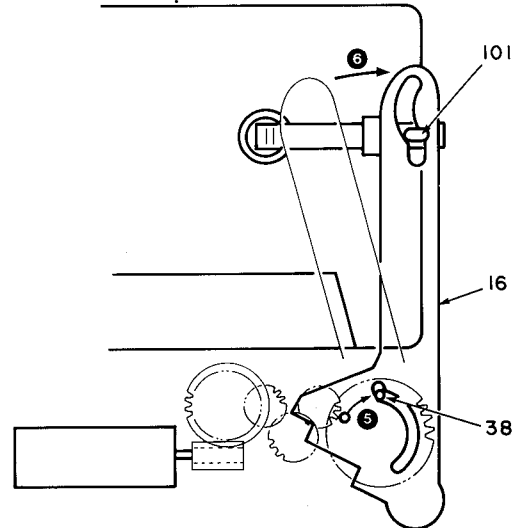
1. Loading

When the cassette tape is pushed in **①**, the loading arm (16) moves via the pack slider (101)... **②**. Thus, the pack-in switch (S1) detects this... **③**, and the sub motor (M2) makes normal rotation... **④**.



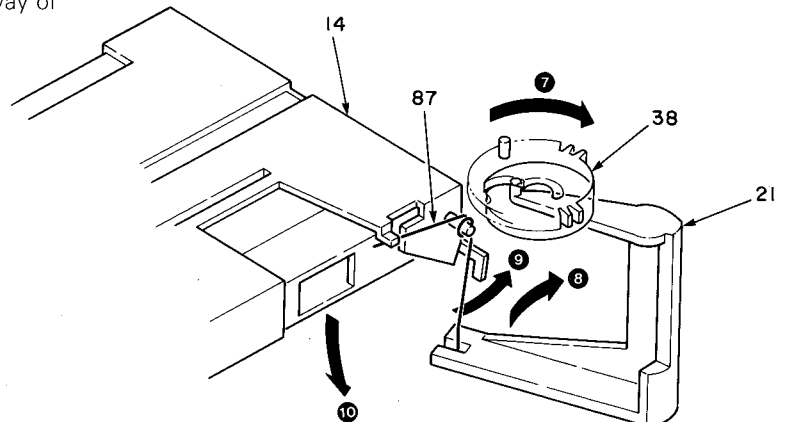
The rotation of the sub motor (M2) causes the load gear (38) to rotate by way of the idle gear... **⑤**.

The load gear (38) provides the rotation of the loading arm (16) by its pin... **⑥**, to load in the cassette tape.



2. PACK DOWN

When the load gear (38) further rotates **⑦**, the action arm (21) also rotates **⑧** to lower the action plate (14)... **⑩**, by way of the action plate spring (87)... **⑨**.

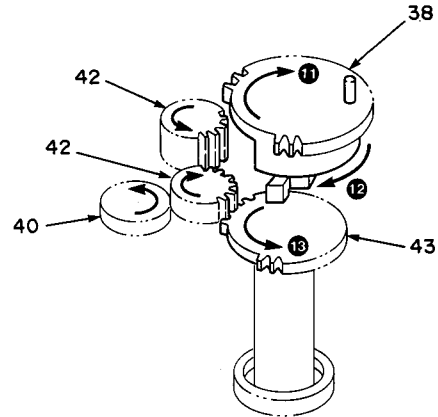


MECHANISM DESCRIPTION

3. Change from load gear to mode gear

When the load gear (38) further more rotates ⑪, the boss under it pushes against the boss of the mode gear (43)... ⑫, so that the mode gear (43) rotates after the shift of its non-toothed section... ⑬.

Thus, the load gear (38) stops rotation on account of its non-toothed section coming.

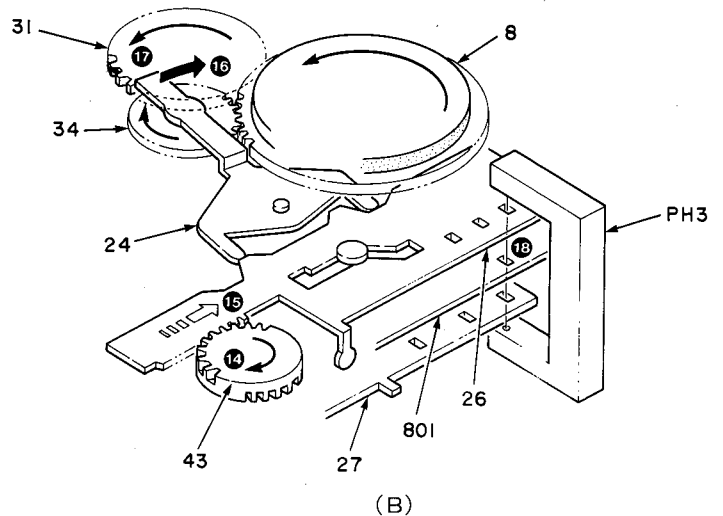


4. REW

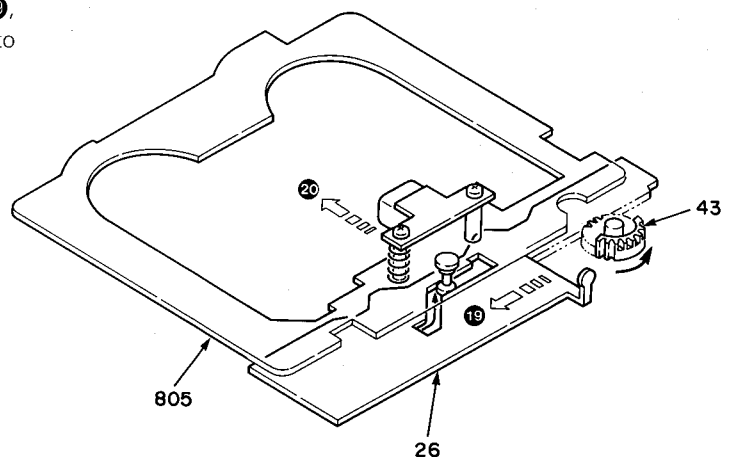
When the mode gear (43) rotates ⑭, the FR plate (26) under it moves ⑮. The cam of the FR plate (26) works to rotate the FR arm (24)... ⑯.

Further, the FR arm (24) moves to transmit the rotation of the flywheel (8) to the reel gear (31)... ⑰.

At this time, a slot (REW hole) of the FR plate (26) is detected by the mode sensor (PH3)... ⑱, to stop the rotation of the sub motor.



For REW or FF, due to the groove of the FR plate (26)... ⑲, the head plate (805) advances ⑳ so that the head moves to a position at which T-ADV is feasible.

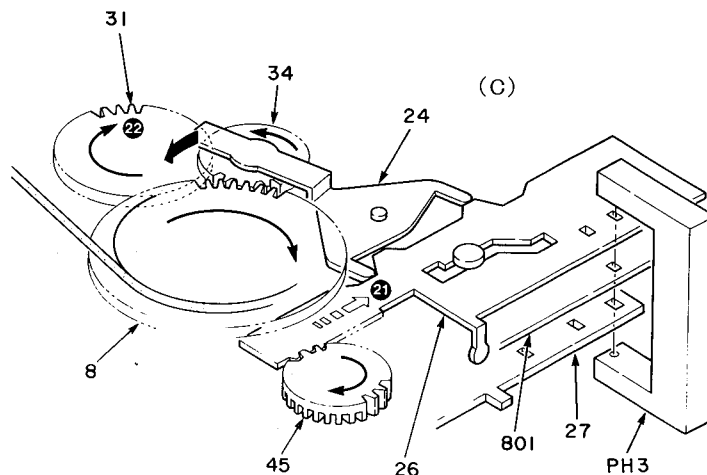


KRC-953R

MECHANISM DESCRIPTION

5. FF

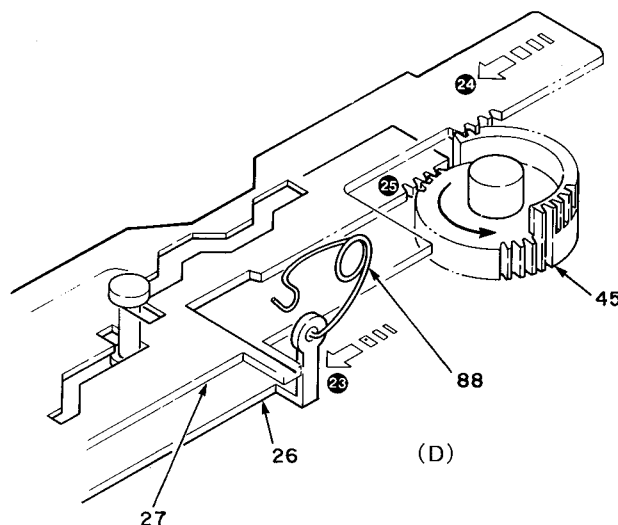
When the sub motor further rotates, the cam of the FR plate (26) moves ②① so that the FR arm (24) is rotated in the reverse direction... ②②. Thus, a slot (FF hole) of the FR plate (26) is detected by the mode sensor (PH3) to stop the rotation of the sub motor.



6. Change from FR plate to PRO plate

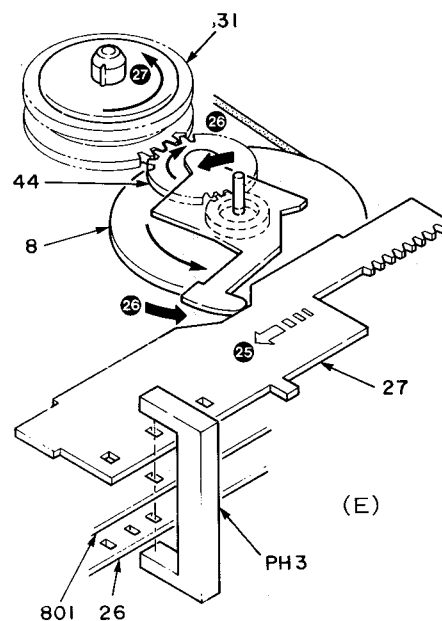
When the sub motor further more rotates, the knob of the FR plate (26) hits against the knob of the PRO plate (27)... ②③, so that the PRO plate (27) moves.

Thus, the rack of the PRO plate (27) enters into engagement with the mode gear... ②④. Then, the rack of the FR plate (26) is disengaged from the mode gear because of its non-toothed section coming... ②⑤. The mode plate spring (88) assists in this operation.



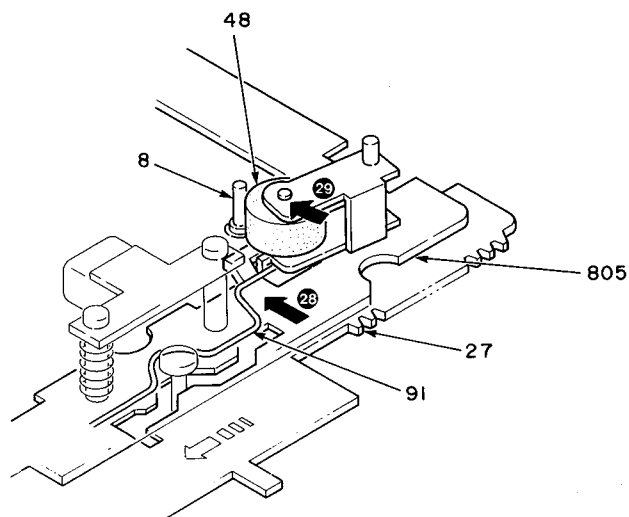
7. FWD PLAY

When the PRO plate (27) moves ②⑤, the takeup plate F is rotated by the cam of the PRO plate (27) and the takeup gear (44) engages with the reel assy (31)... ②⑥. The rotation of the flywheel (8) is transmitted to the reel assy (31) by way of the takeup gear (44)... ②⑦. Thus, a slot (FWD hole) of the PRO plate (27) is detected by the mode sensor (PH3) to stop the rotation of the sub motor.



MECHANISM DESCRIPTION

The groove of the PRO plate (27) serves to advance the head plate (805)... 28, to move the head and the pinch roller (48) to their FWD PLAY position. The pinch roller (48) is contacted to the capstan (8) by pressure due to the shift to the takeup plate and the force of the pinch roller spring... 29.

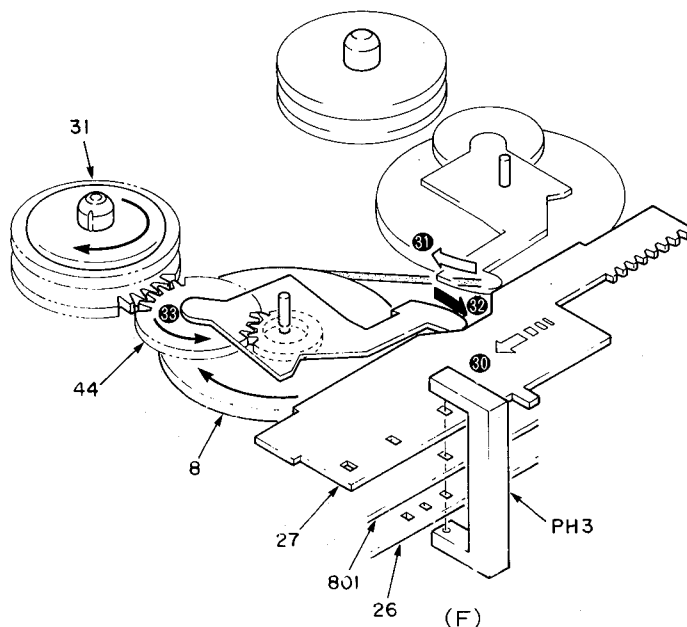


8. REV PLAY

When the PRO plate (27) further moves, the takeup plate F returns by the cam of the PRO plate (27)... 31, and the takeup plate R rotates 32.

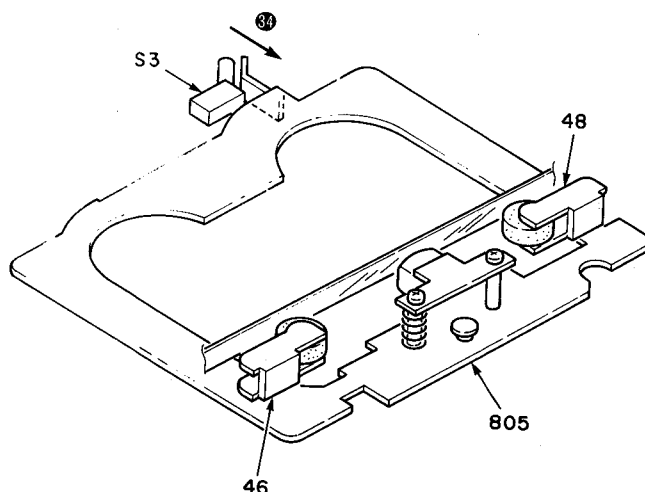
The rotation of the flywheel is transmitted to the reel assy (31) by way of the takeup gear (44)... 33.

Thus, a slot (REV hole) of the PRO plate (27) is detected by the mode sensor (PH3) to stop the rotation of the sub motor.



9. STANDBY (PAUSE)

From a given mode, when the head plate (805) regresses due to the reverse rotation of the sub motor rotates, when the pause switches (S3) acts ("L" to "H") to stop the rotation of the sub motor, the pause mode is entered.



KRC-953R

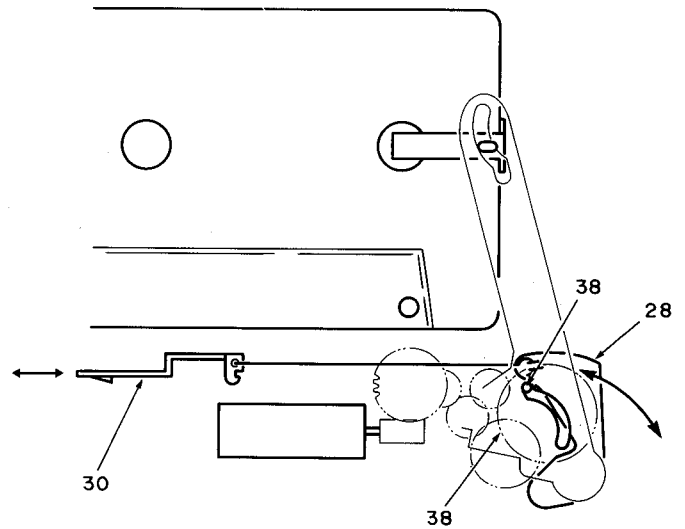
MECHANISM DESCRIPTION

10. EJECT

When the sub motor is reversely rotated, an operation reverse to the loading operation is performed to eject the cassette tape.

11. SHUTTER DOOR

For loading or eject, the door arm (28) is actuated by the pin of the load gear (38). The door arm (28) moves the door lever (30) forwards or backwards to open or close the cassette door (lid).

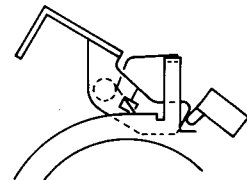
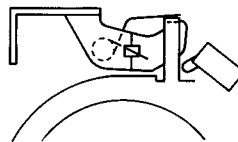
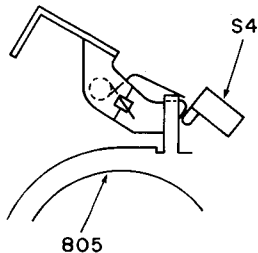


12. AUTO REVERSE

The tape end is detected by the sensor which senses the reel rotation.

13. AUTO METAL

The auto metal switch (S4) detects the high position hole of the cassette tape when the head plate (805) is advancing.



ADJUSTMENT

Set the controls and switches as follows.

BALANCE :center position LOUD :OFF LOCAL :OFF
 FADER :center position T·ADV :OFF AUTO :OFF
 BASS :center position METAL :OFF
 TREBLE :center position DOLBY NR :OFF

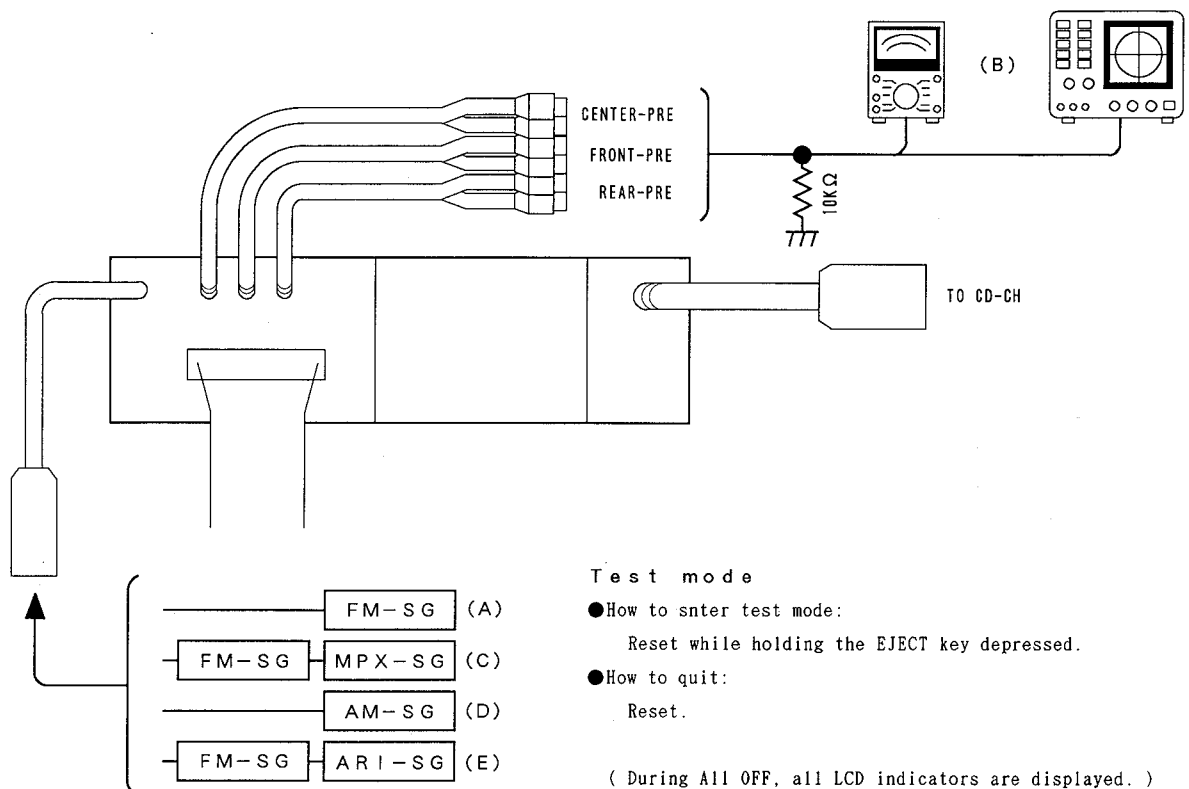
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER(RECEIVER) SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION							
1	DISCRI- MINATOR	(A) 98.1MHz 0 dev 60dB μ (ANT input)	Connect a DC voltmeter to TP11 (X14 B/2)	FM 98.1MHz	T1 (X14 B/2)	0V	(a)
2	SEPA- RATION	(C) 98.1MHz 1kHz, ± 40 kHz dev Pilot: ± 6.0 kHz dev Selector: L or R 60dB μ (ANT input)	(B)	FM 98.1MHz	VR12 (X14 B/2)	Adjust it so that the crosstalk from L to R and R to L become minimum.	
3	ANRC	(C) 98.1MHz 1kHz, ± 40 kHz dev Pilot: ± 6.0 kHz dev Selector: L or R 35dB μ (ANT input)	(B)	FM 98.1MHz	VR14 (X14 B/2)	Separation 10dB	
4	SIGNAL METER LEVEL	(A) 98.1MHz 0 dev 20dB μ (ANT input)	Connect a DC voltmeter to TP4 (X14 A/2)	FM 98.1MHz TEST MODE	VR13 (X14 B/2)	1.5 V	(b)
5	MUTE SENSI- TIVITY LEVEL	(A) 98.1MHz 0 dev 5 dB μ (ANT input)	Connect a DC voltmeter to TP2 (X14 A/2)	FM 98.1MHz TEST MODE	VR15 (X14 B/2)	Adjust until panel indicator "□" stop lighting. (TP2 Voltage High $\rightarrow$ Low)	
6	SOFT MUTE LEVEL	(A) 98.1MHz 1kHz, ± 40 kHz dev 60dB $\mu \rightarrow$ No input	(B)	FM 98.1MHz	VR11 (X14 B/2)	Output Noise level -25dB μ (When not add any signal to ANT terminal)	
DK SECTION							
7	DK LEVEL	(E) 98.1MHz 0 mod SK 5.33% DK 30% BK 60% 60dB μ (ANT input)	Connect a AC voltmeter to TP12 (X14 B/2)	FM 98.1MHz SDK: OFF	L13 VR16 (X14 B/2)	Maximum (125Hz)	(d)
MW SECTION							
(1)	SEEK STOP LEVEL	(D) 999kHz 400Hz, 30% mod 35dB μ (ANT input)	Connect a DC voltmeter to TP1 (X14 A/2)	MW 999kHz	VR1 (X14 A/2)	Voltage Low $\rightarrow$ High	
CASSETTE DECK SECTION							
[1]	PLAYBACK LEVEL	MTT-150	Connect a AC voltmeter to TP1(X89 B/2)	TAPE PLAY	VR1 (L) VR2 (R) (X89 B/2)	300mV	(c)

Test mode : To enter the test mode, press RST while holding EJECT SW depressed.

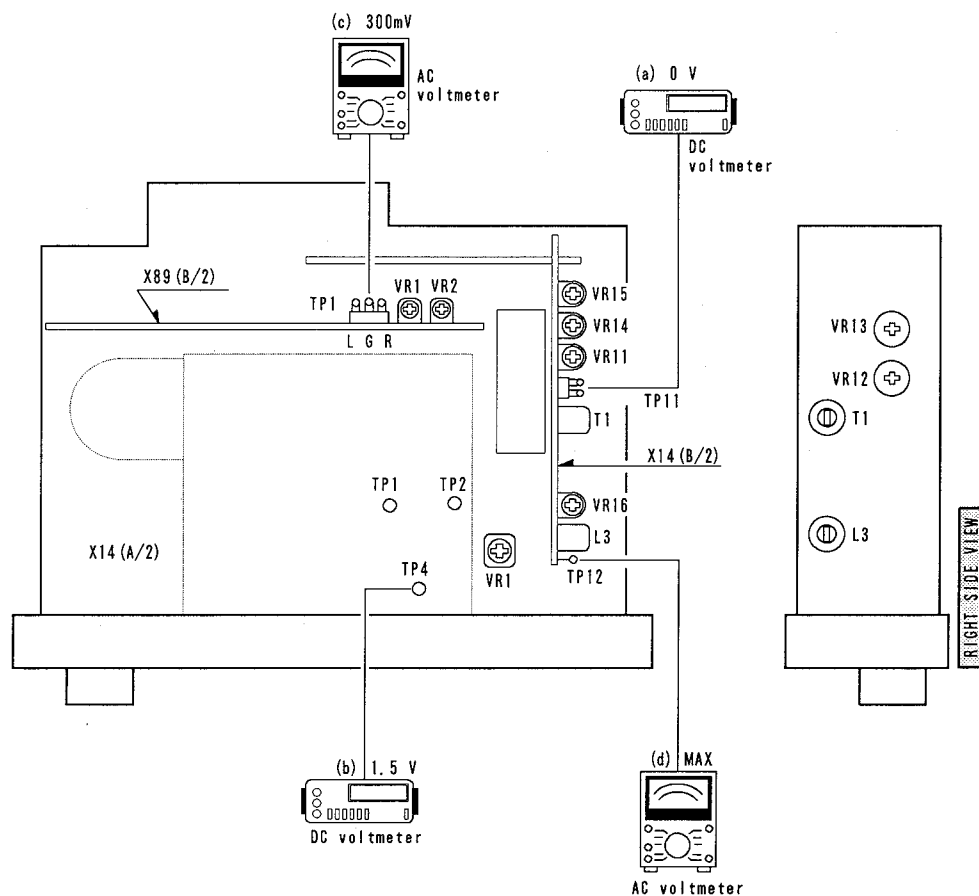
To quit : Press RST to quit the test mode.

KRC-953R

ADJUSTMENT



KRC-953R



PC BOARD (Component side view)

SYNTHESIZER UNIT (X14-3422-70)

SWITCH UNIT (X25-4742-70)

X25-474X-XX

X14-342X-XX A/2

X14 B/2

DC voltmeter
SEEK STOP LEVEL
Voltage Low→High

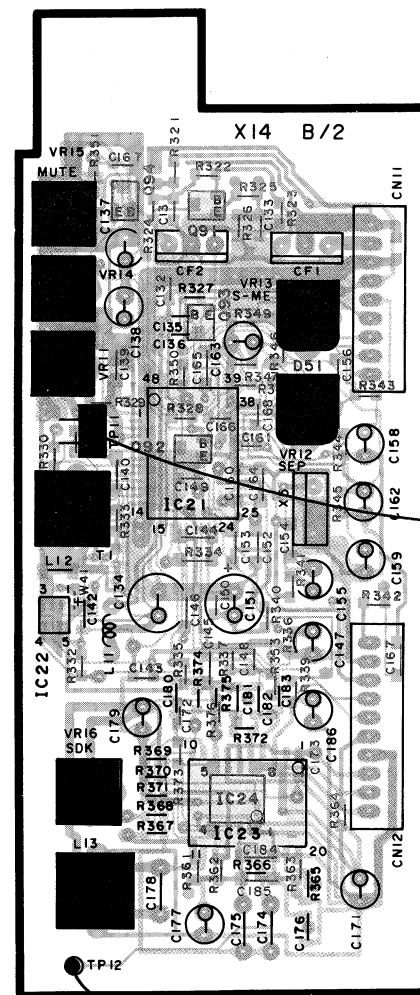
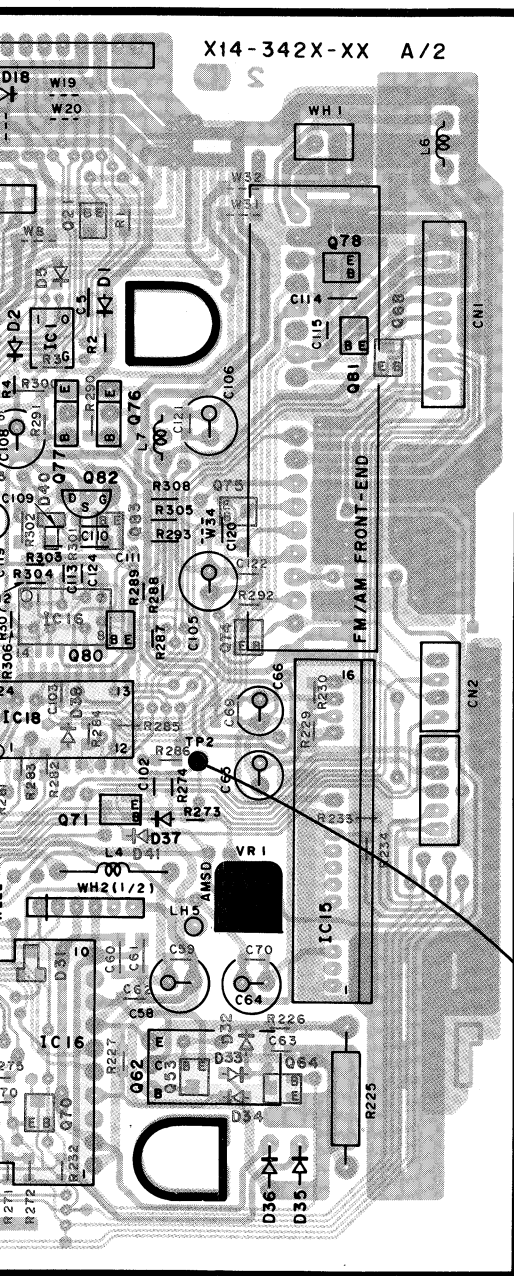
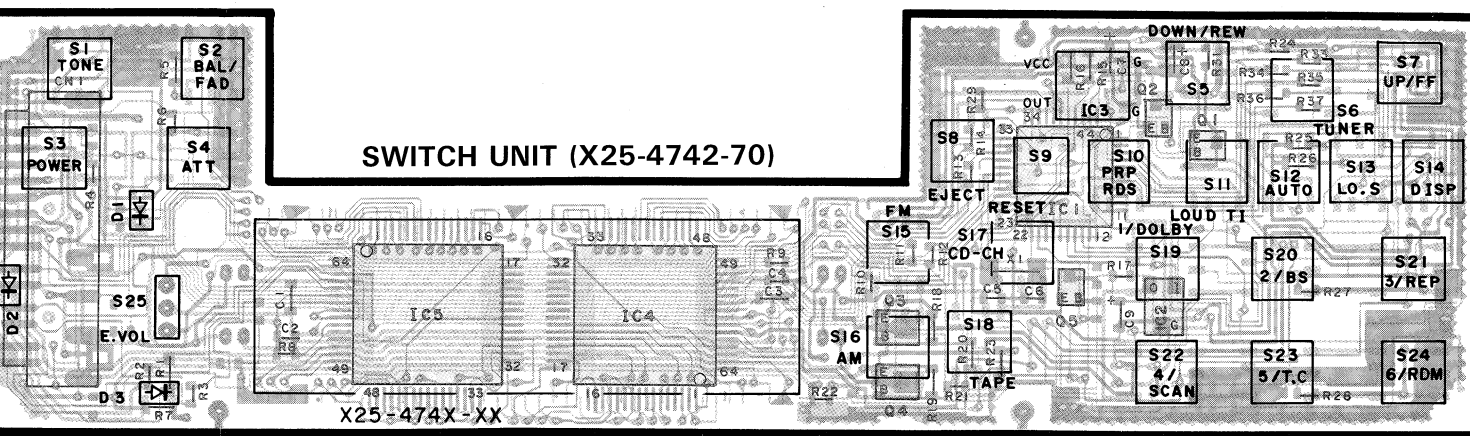
DC voltmeter
(b) SIGNAL METER LEVEL
1.5 V

DC voltmeter
(a) DISCRIMINATOR
0 V

AC voltmeter
(d) DK LEVEL
Maximum
(125 Hz)

DC voltmeter
MUTE SENSITIVITY LEVEL
Voltage High→Low

AC voltmeter
(c) PLAYBACK
LEVEL
300 mV



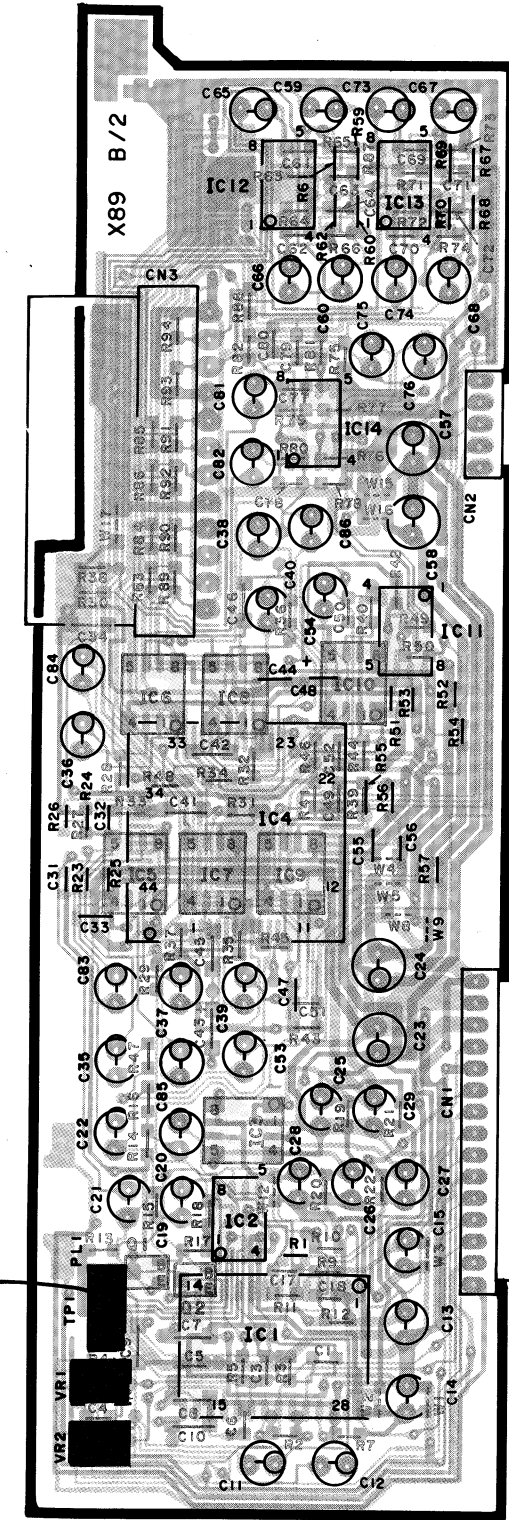
DC voltmeter
(a) DISCRIMINATOR
0 V

AC voltmeter
(d) DK LEVEL
Maximum
(125 Hz)

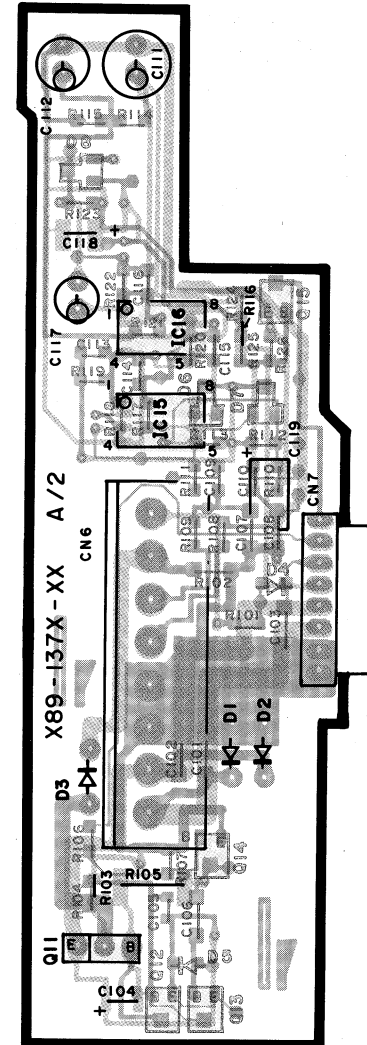
DC voltmeter
MUTE SENSITIVITY LEVEL
Voltage High→Low

DC voltmeter
(b) SIGNAL METER LEVEL
1.5 V

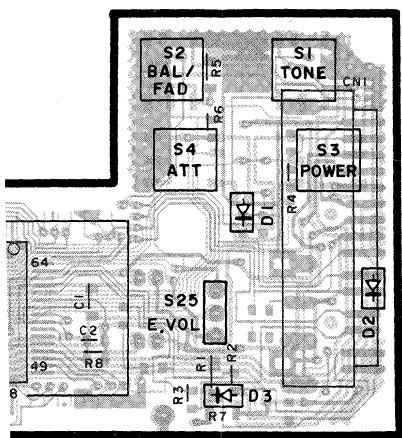
**DAUGHTER UNIT
(X89-1372-70)**



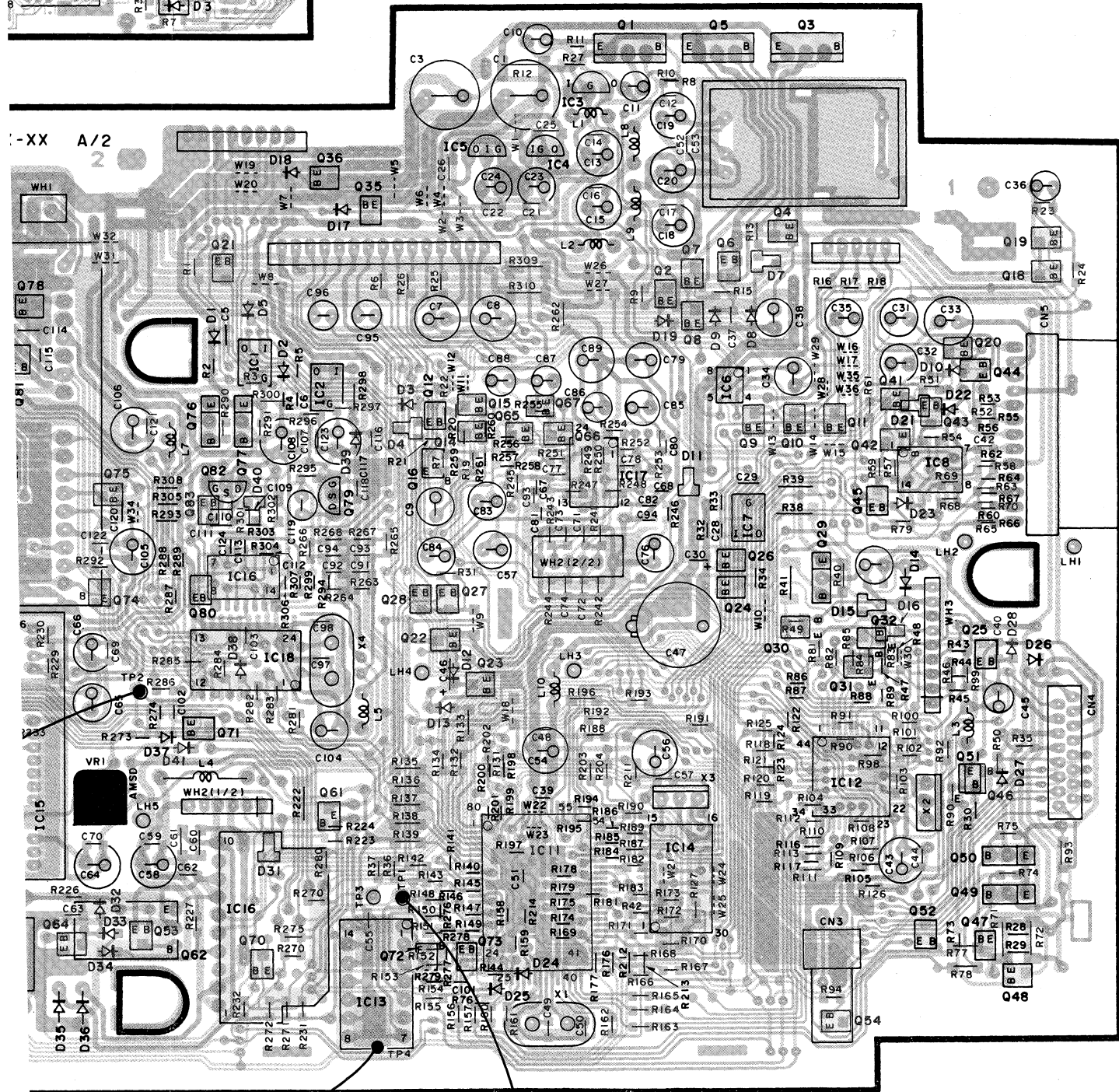
AC voltmeter
(c) PLAYBACK
LEVEL
300 mV



Refer to the schematic diagram for the values of resistors and capacitors.



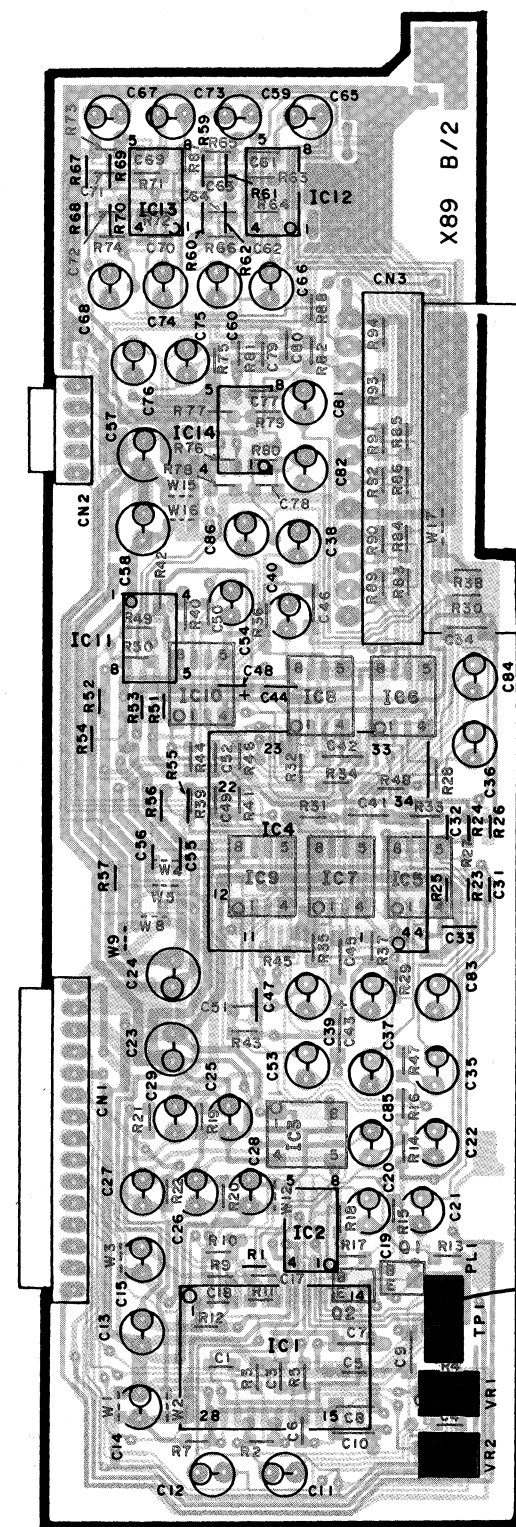
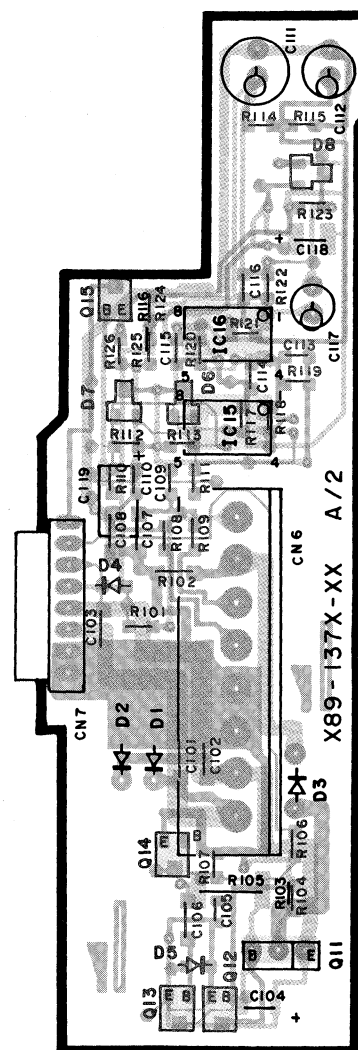
SYNTHESIZER UNIT (X14-3422-70)



ter
- METER
1.5 V

DC voltmeter
SEEK STOP LEVEL
Voltage Low → High

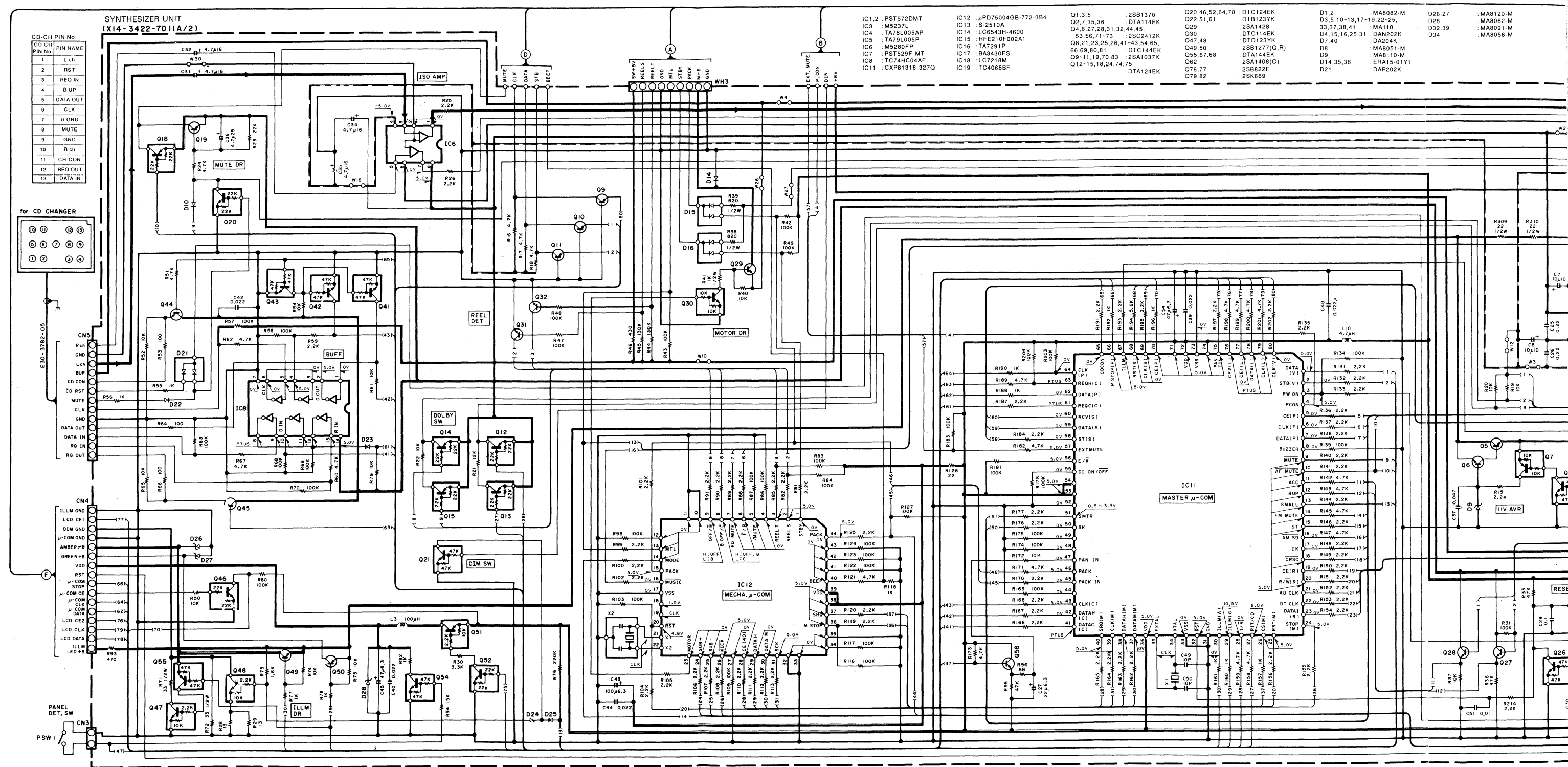
DAUGHTER UNIT
(X89-1372-70)



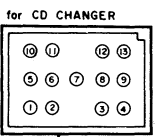
AC voltmeter
(c) PLAYBACK
LEVEL
300 mV

Refer to the schematic diagram for the values of resistors and capacitors.

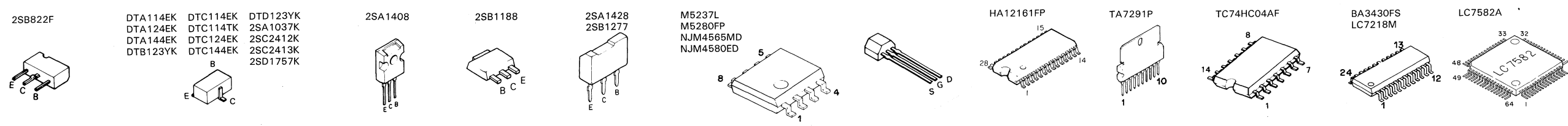
1
2
3
4
5
6
7



CD CH PIN No.	PIN NAME
1	L ch
2	RST
3	REQ IN
4	B UP
5	DATA OUT
6	CLK
7	D GND
8	MUTE
9	GND
10	R ch
11	CH CON
12	REQ OUT
13	DATA IN

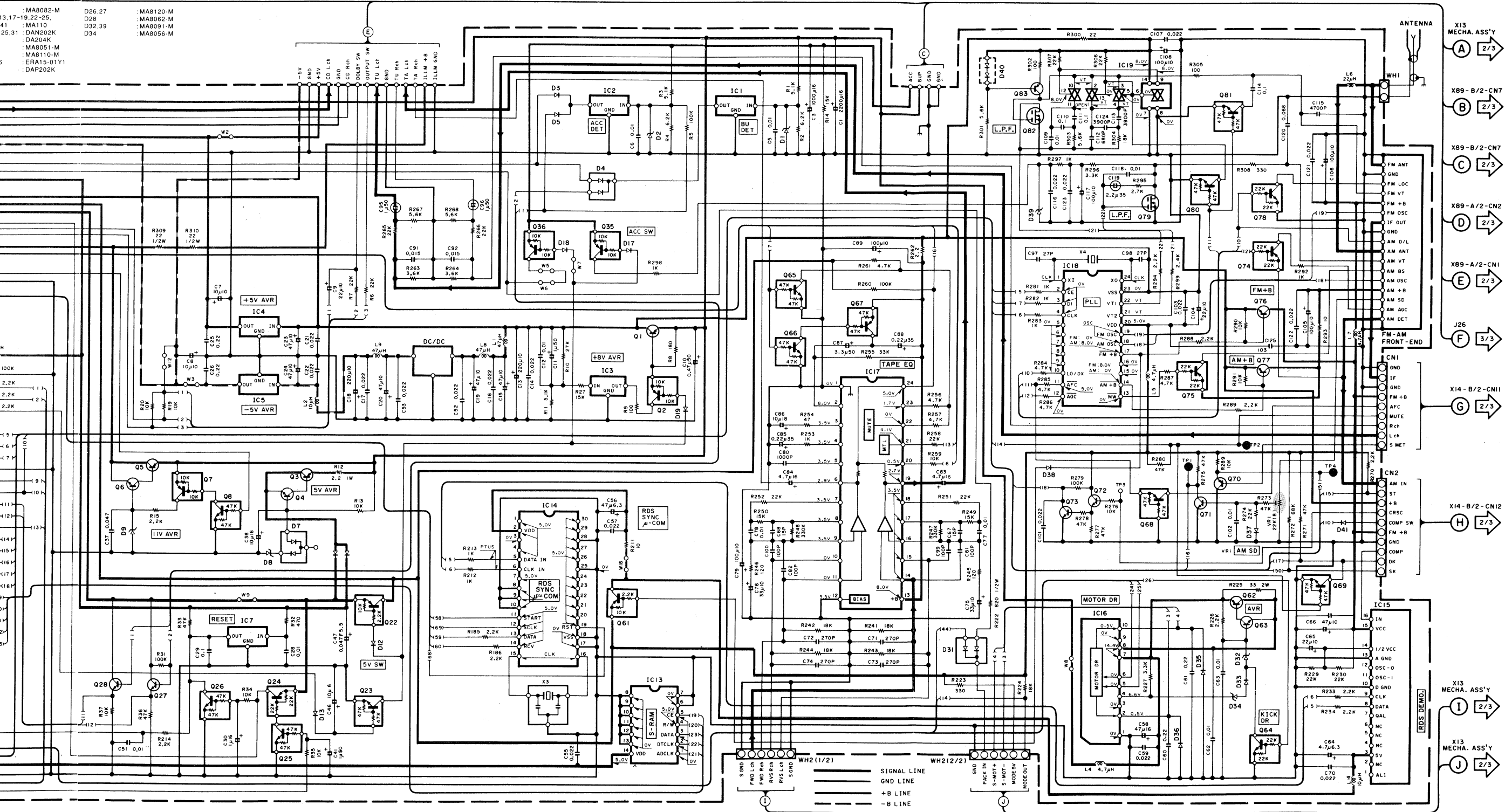


- | | | | | | |
|--|---|---|--|--|--|
| IC1,2 : PST572DMT
IC3 : M5237L
IC4 : TA78L005AP
IC5 : TA79L005P
IC6 : M5280FP
IC7 : PST529F-MT
IC8 : TC74HC04AF
IC9 : CXP81316-327Q | IC12 : μPD75004GB-772-384
IC13 : S-2510A
IC14 : LC6543H-4600
IC15 : HFE210F002A1
IC16 : TA7291P
IC17 : BA3430FS
IC18 : LC7218M
IC19 : TC4066BF | Q1,3,5 : 2SB1370
Q2,7,35,36 : DTA114EK
Q4,6,27,28,31,32,44,45 : 2SC2412K
Q5,56,71-79 : 2SC2412K
Q8,21,23,25,26,41-43,54,65 : 2SC144EK
Q9-11,19,70,83 : 2SA1037K
Q12-15,18,24,74,75 : DTA124EK | Q20,46,52,64,78 : DTC124EK
Q22,51,61 : DTA114EK
Q29 : 2SA1428
Q30 : DTC144EK
Q47,48 : DTD123YK
Q49,50 : 2SB1277(Q,R)
Q55,67,68 : DTA144EK
Q62 : 2SA1408(O)
Q67,77 : 2SB822F
Q79,82 : 2SK669 | D1,2 : MA8082-M
D3,5,10-13,17-19,22-25 : MA110
D3,37,38,41 : MA110
D4,15,16,25,31 : DA202K
D7,40 : DA204K
D8 : MA8051-M
D9 : MA8110-M
D14,35,36 : ERA15-01Y1
D21 : DAP202K | D26,27 : MA8120-M
D28 : MA8062-M
D32,39 : MA8091-M
D34 : MA8056-M |
|--|---|---|--|--|--|



MA8082-M
D26,27
41
25,31
MA110
D32,39
D34
DA204K
MA8051-M
MA8110-M
ERA15-01Y1
DAF202K

MA8120-M
MA8062-M
MA8091-M
MA8056-M



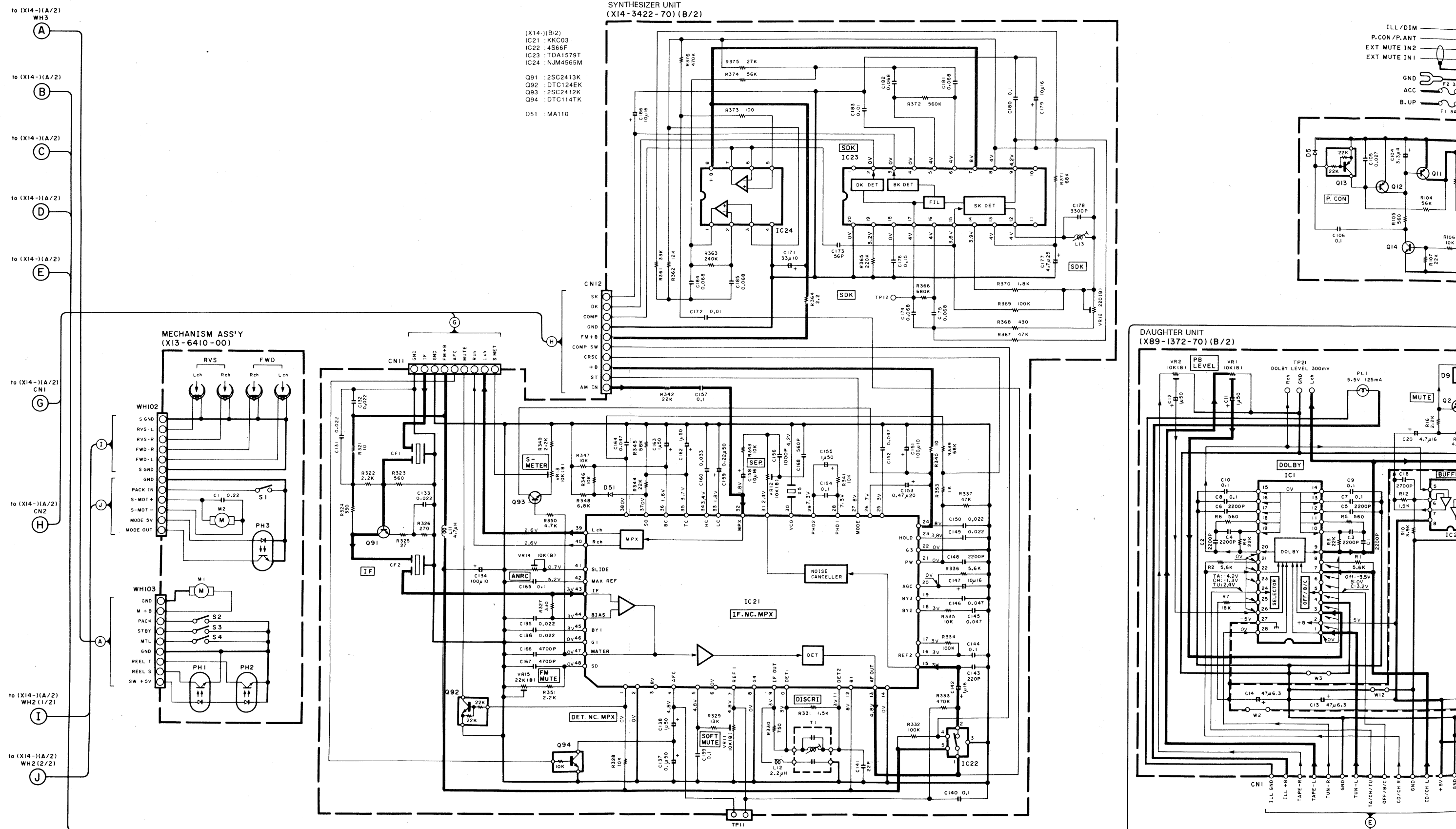
KRC-953R(E) (1/3)

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

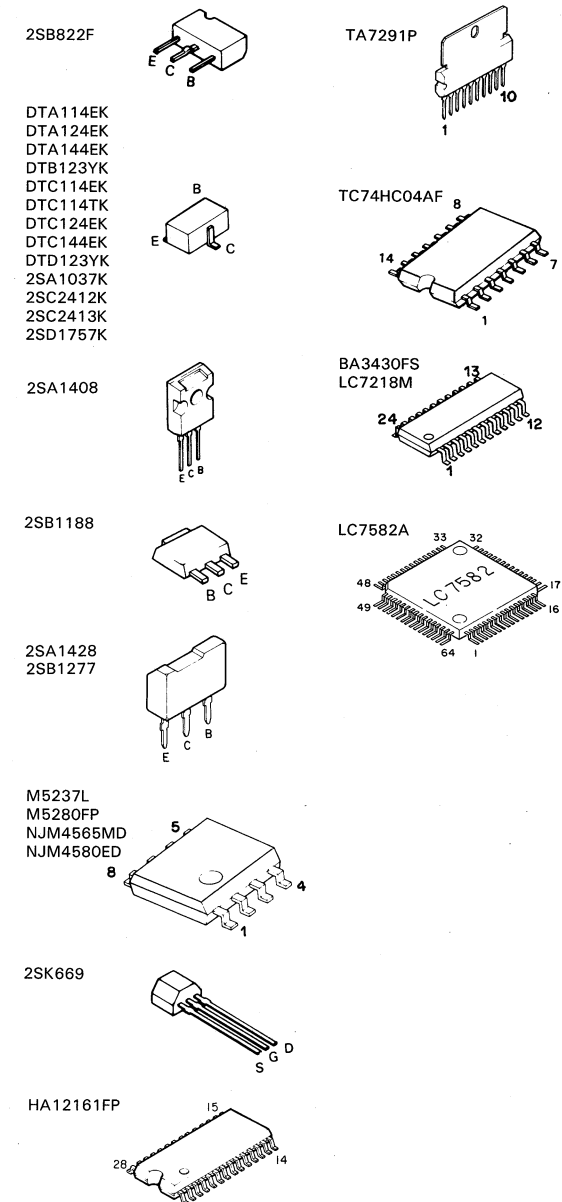
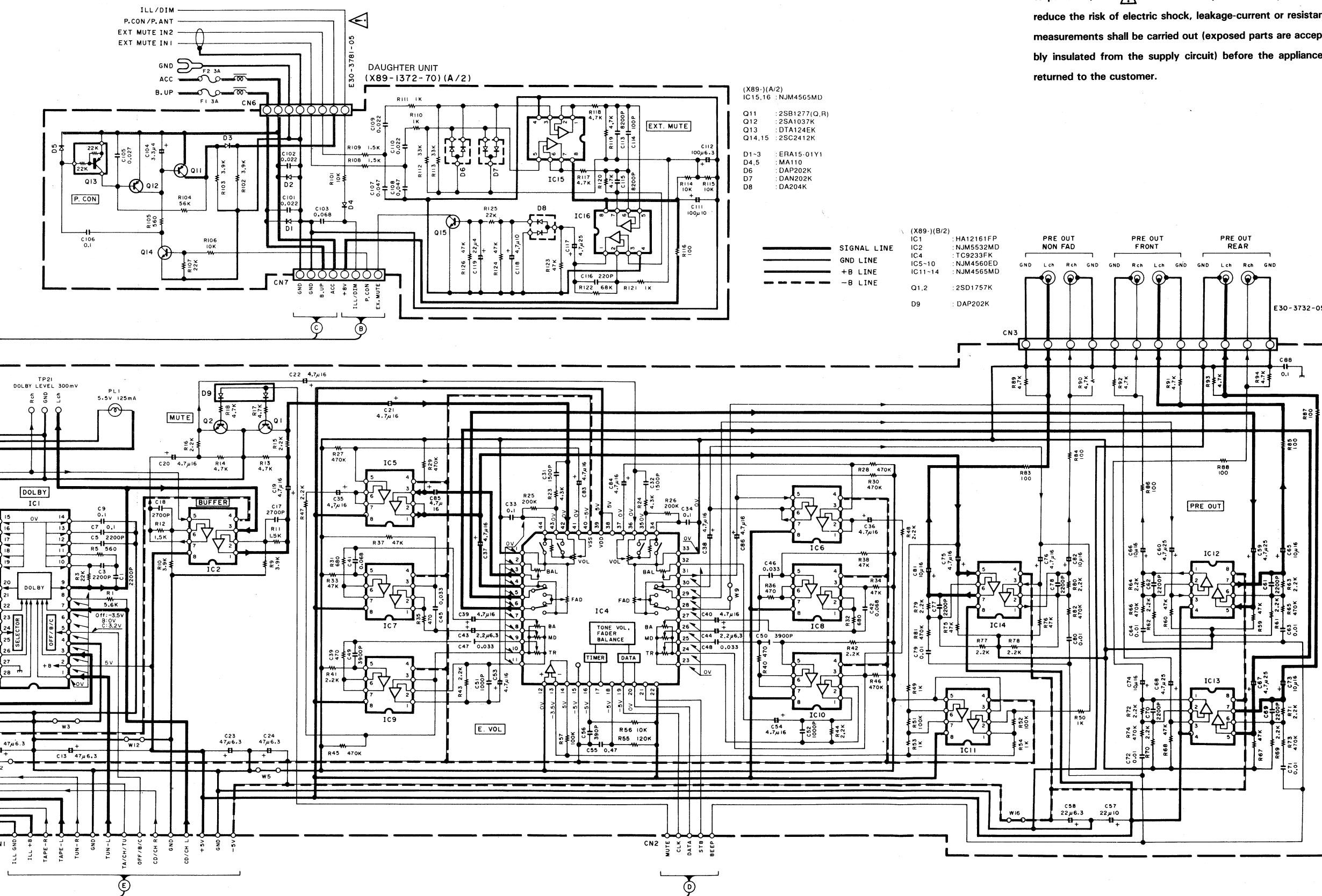
DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

KRC-953R
KENWOOD

Y37-1062-70



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



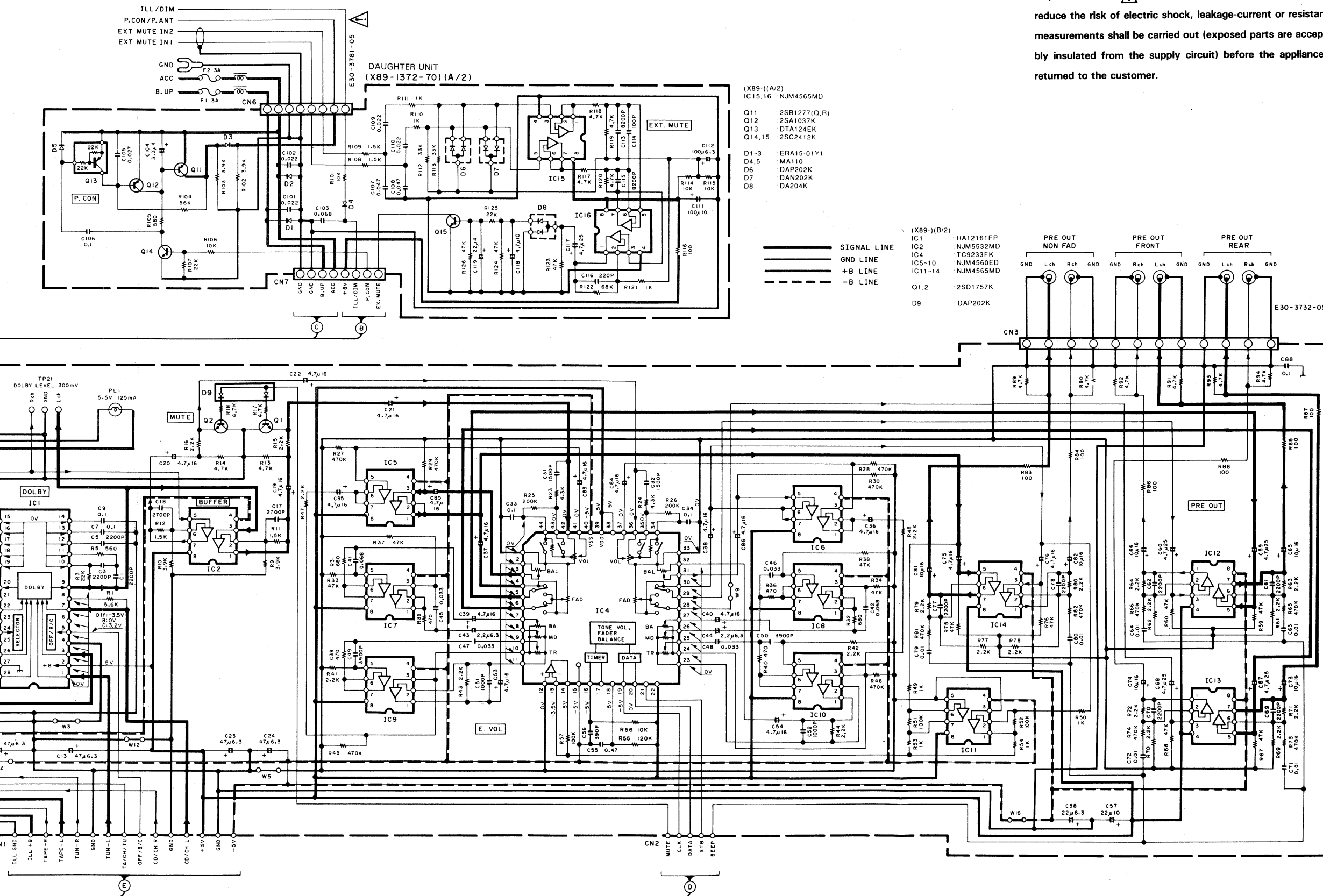
DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

KRC-953R(E) (2/3)

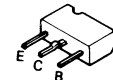
KRC-953R
KENWOOD

Y37-1062-70

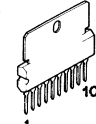
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



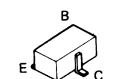
2SB822F



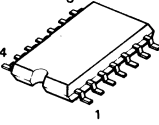
TA7291P



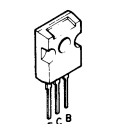
DTA114EK
DTA124EK
DTA144EK
DTB123YK
DTC114TK
DTC124TK
DTC144EK
DTD123YK
2SA1037K
2SC2412K
2SC2413K
2SD1757K



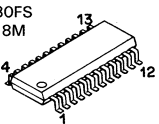
TC74HC04AF



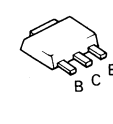
2SA1408



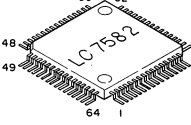
BA3430FS
LC7218M



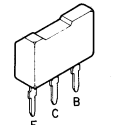
2SB1188



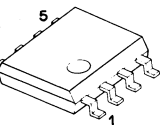
LC7582A



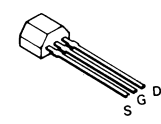
2SA1428
2SB1277



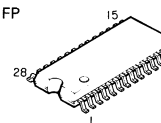
M5237L
M5280FP
NJM4565MD
NJM4580ED



2SK669



HA12161FP



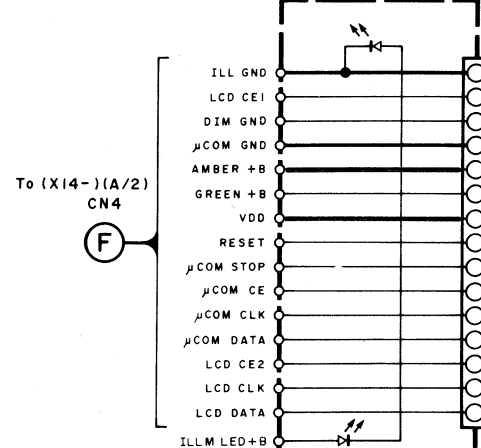
DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

KRC-953R(E) (2/3)

KRC-953R
KENWOOD

Y37-1062-70

SWITCH UNIT
(J26-4003-05) (X25-4742-70)

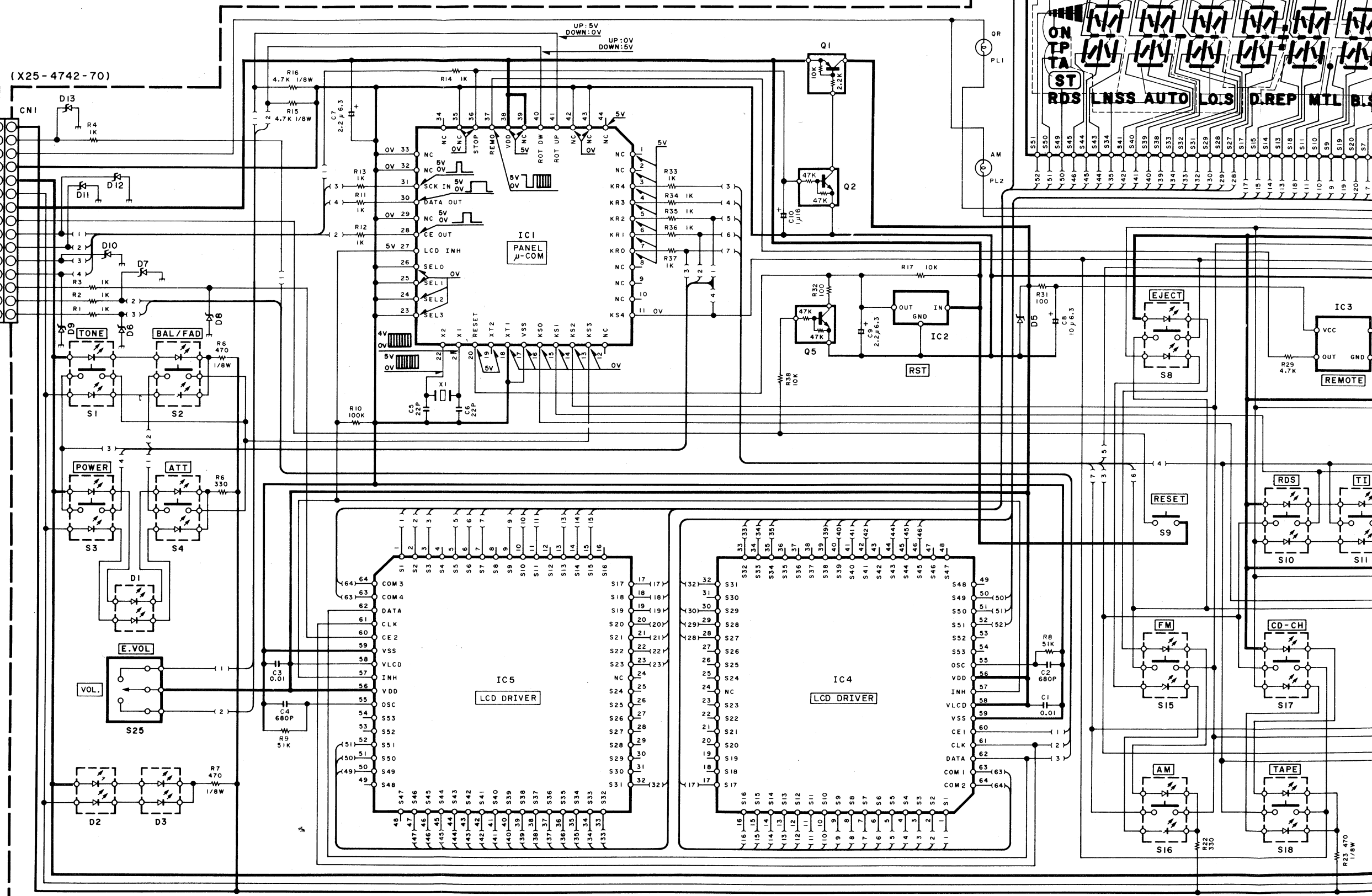


— SIGNAL LINE
— GND LINE
— +B LINE

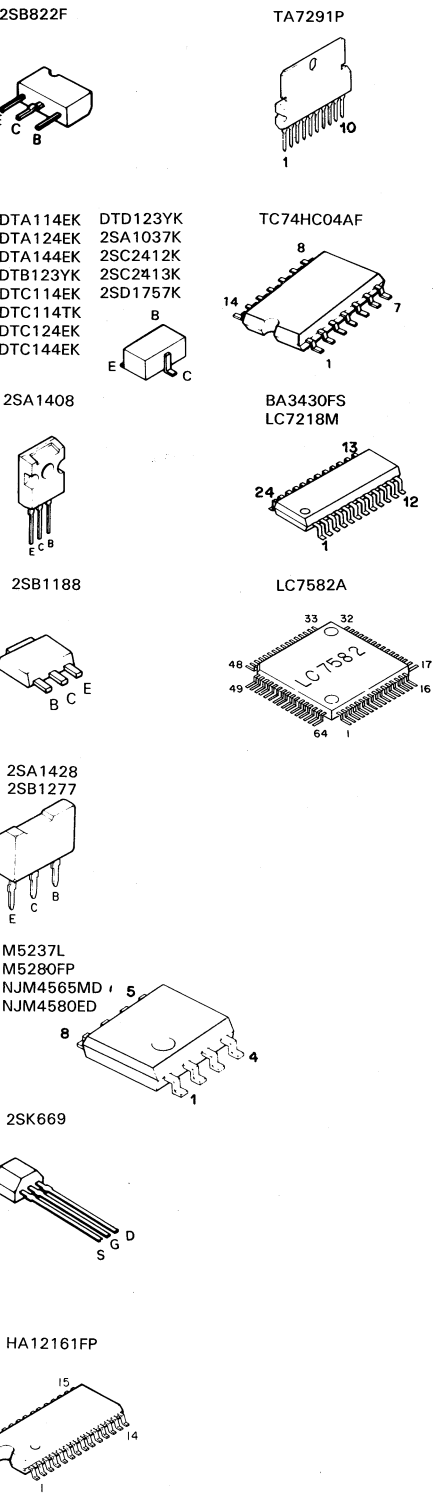
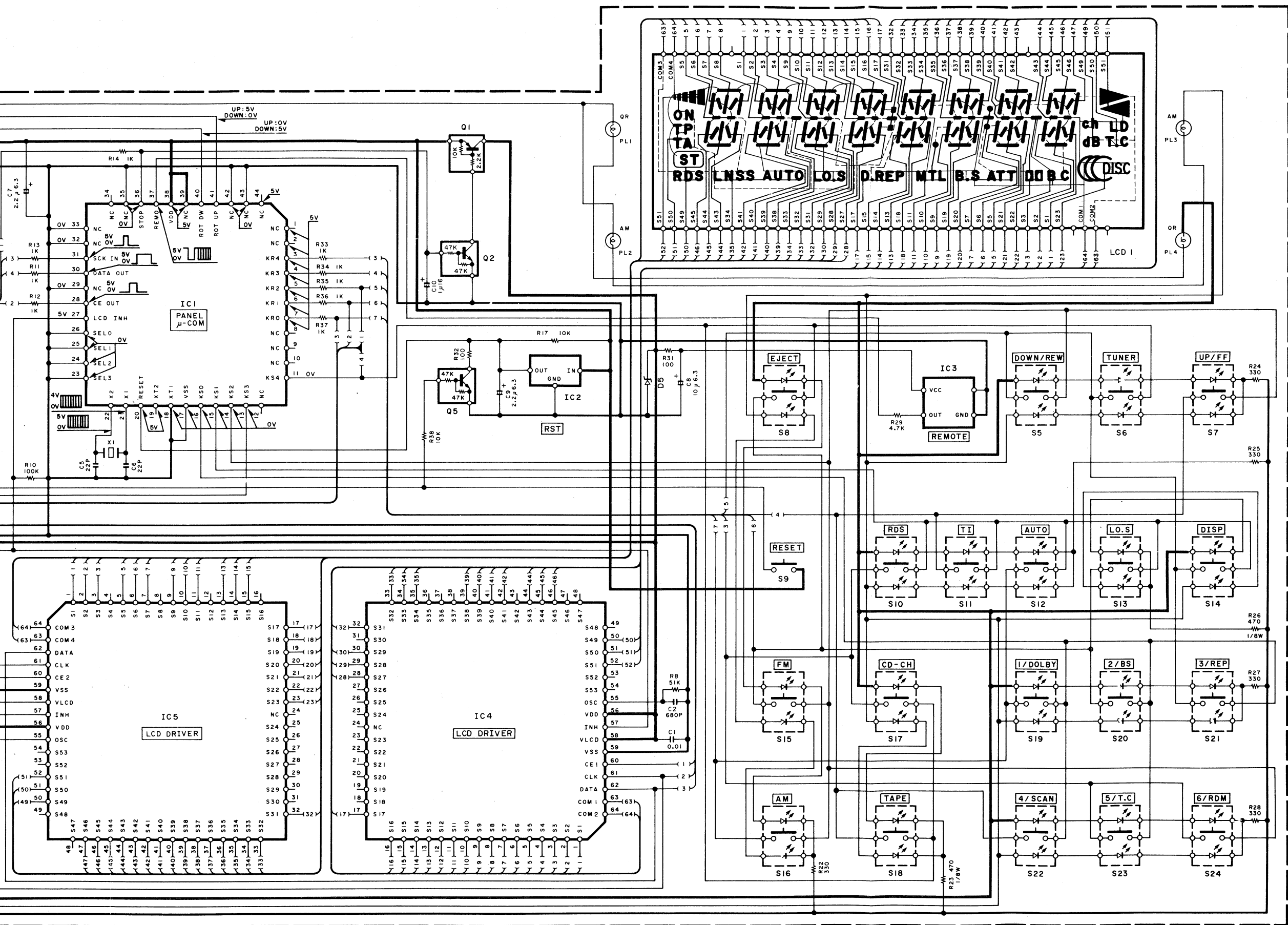
- IC1 : 75004GB-773-3B4
IC2 : PST572DMT
IC3 : RS-21
IC4,5 : LC7582A

Q1 : DTB123YK
Q2 : DTC124EK
Q3,4 : 2SB1188
Q5 : DTC144EK

D1-3 : B30-1349-05

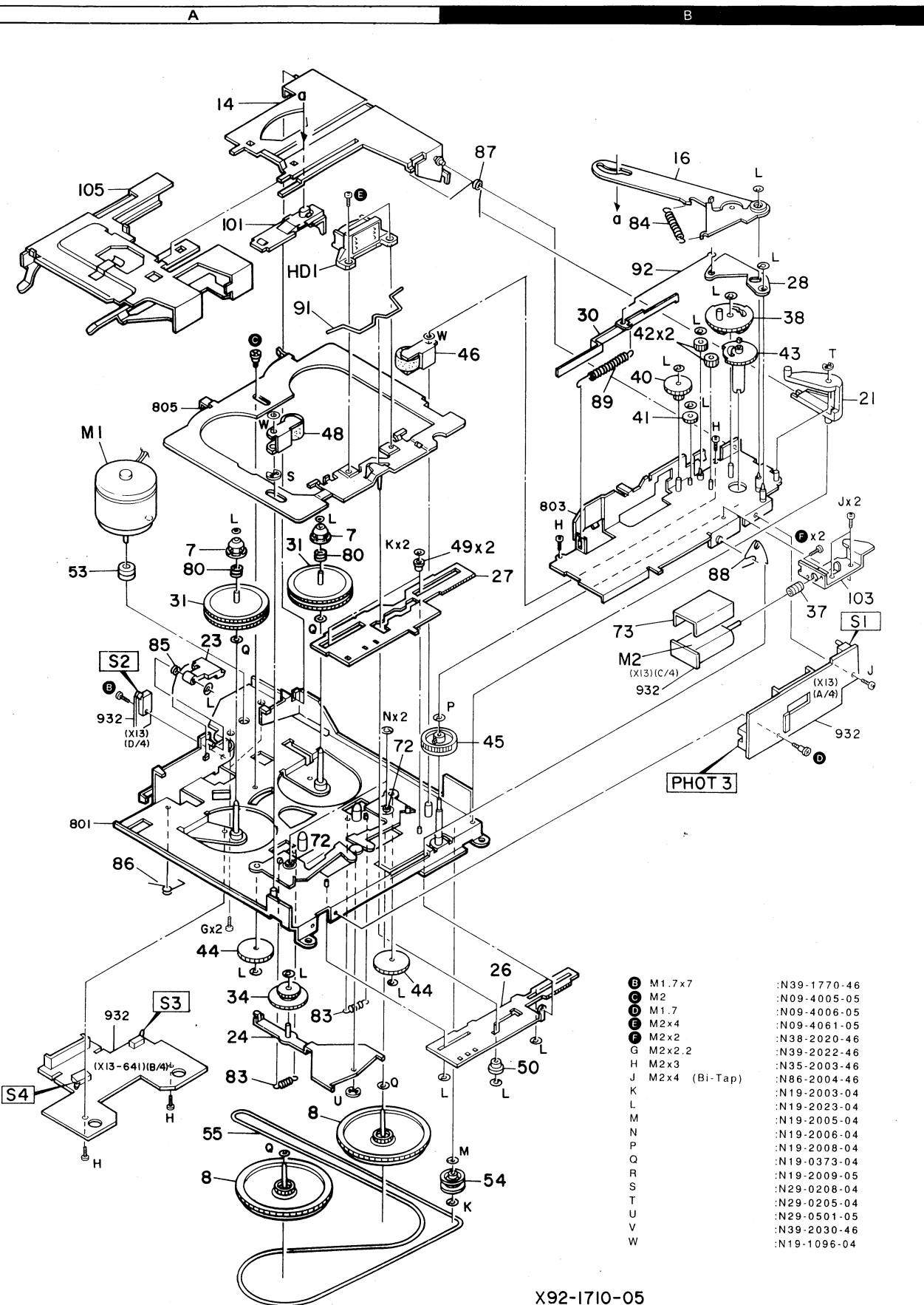


CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

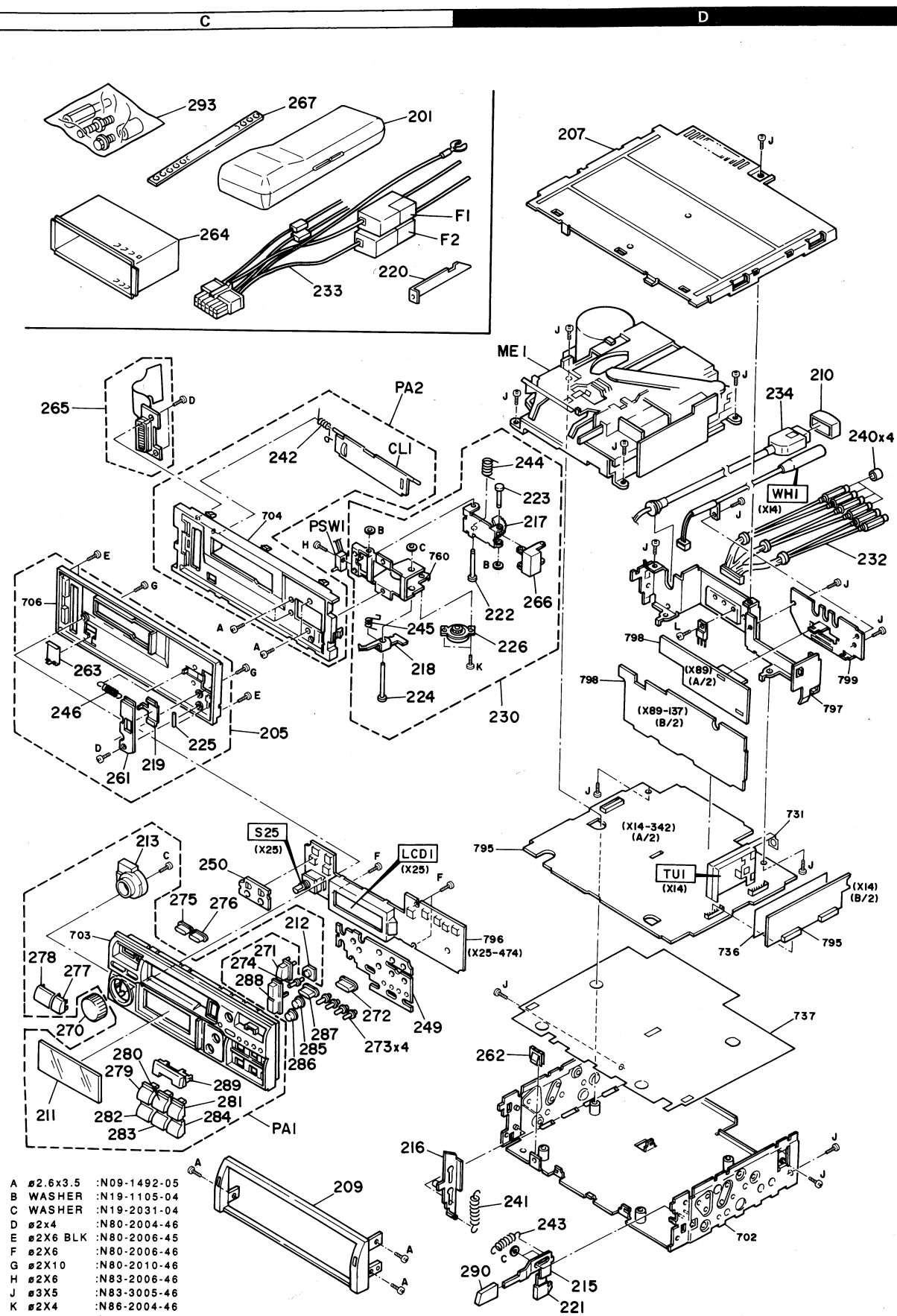
EXPLODED VIEW (MECHANISM)



X92-1710-05

Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (UNIT)

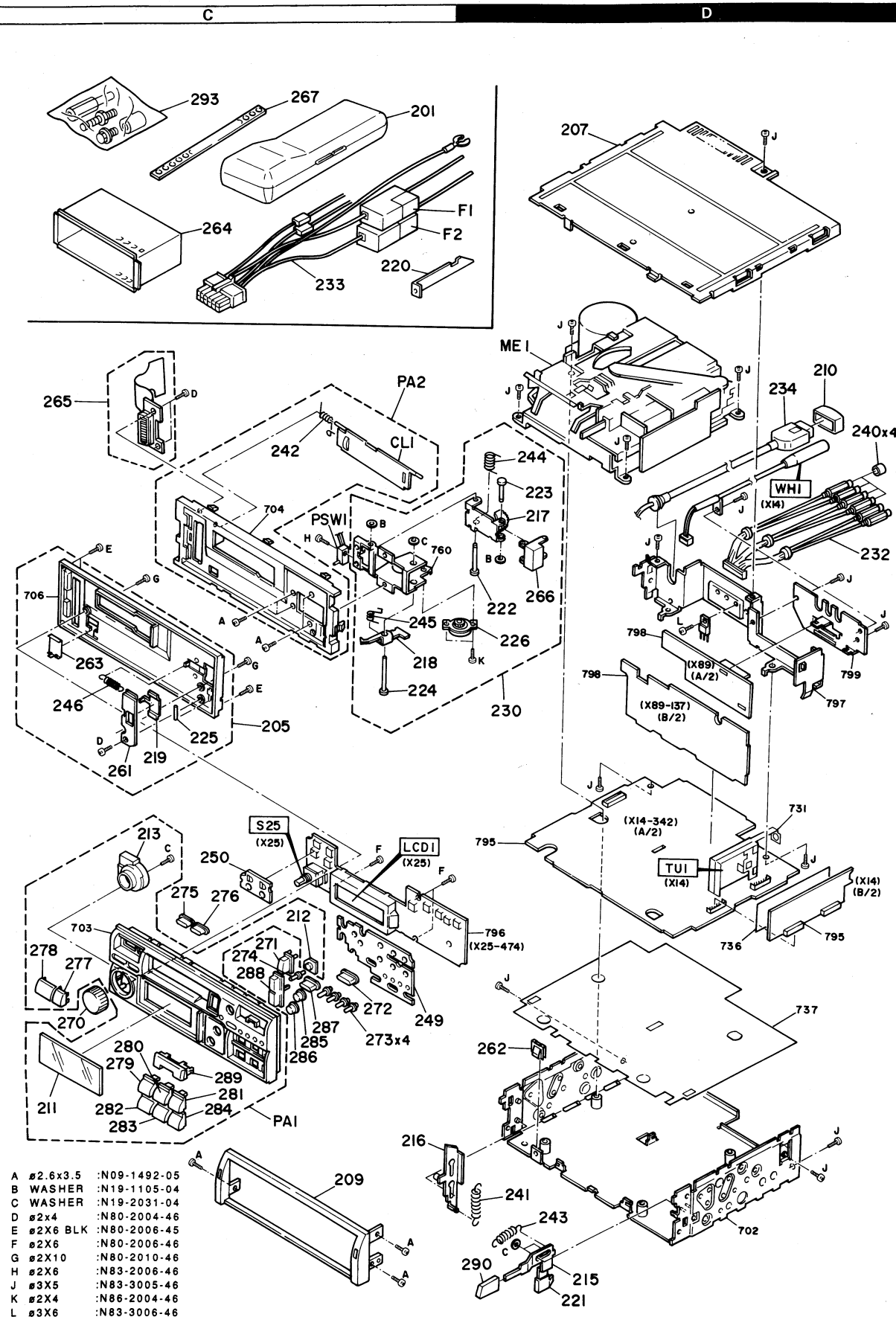


KRC-953(R)

Parts with the exploded numbers larger than 700 are not supplied.

KRC-953R

EXPLODED VIEW (UNIT)



KRC-953R

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Destination	Remarks
参照番号	位置	新	部品番号	部品名 / 規格	仕向	備考
KRC-953R						
201	1C	*	A02-1413-01	PLASTIC CABINET		
205	2C	*	A46-1201-03	REAR COVER ASSY		
207	1D	*	A52-0638-02	TOP COVER		
CL1	2C	*	A53-1538-03	CASSETTE LID		
PA1	3C	*	A20-7755-12	PANEL ASSY		
PA2	2C	*	A22-1201-03	SUB PANEL ASSY		
209	3C		B07-2029-02	ESCUTCHEON		
210	2D		B09-0062-05	CAP		
211	3C	*	B10-1454-03	FRONT GLASS		
212	3C	*	B10-1457-04	FRONT GLASS		
213	2C	*	B19-0891-13	LIGHTING BOARD		
-			B46-0100-20	WARRANTY CARD		
-			B46-0182-14	ID CARD		
-		*	B64-0159-00	INSTRUCTION MANUAL		
-		*	B64-0160-00	INSTRUCTION MANUAL		
-		*	B64-0161-00	INSTRUCTION MANUAL		
215	3D	*	D10-2735-04	LEVER		
216	3D	*	D10-2736-04	LEVER		
217	2D	*	D10-2737-04	ARM		
218	2C	*	D10-2738-14	ARM		
219	2C	*	D10-2739-04	SLIDER		
220	1C		D10-2740-04	LEVER		
221	3D	*	D10-2741-14	LEVER		
222	2D	*	D21-2116-04	SHAFT		
223	2D	*	D21-2117-04	SHAFT		
224	2C	*	D21-2118-04	SHAFT		
225	2C	*	D21-2119-04	SHAFT		
226	2D	*	D39-0204-05	DAMPER		
230	2D	*	D40-1031-13	MECHANISM ASSY		
232	2D	*	E30-3732-05	AUDIO CORD		
233	2D	*	E30-3781-05	DC CORD (CRITICAL)		
234	2D	*	E30-3782-05	CORD WITH CONNECTOR		
240	1D		F29-0049-05	INSULATING COVER		
F1, 2			F06-3026-05	FUSE (3A)		
241	3D		G01-2040-04	EXTENSION SPRING		
242	1C		G01-2525-04	TORSION COIL SPRING		
243	3D	*	G01-2600-04	EXTENSION SPRING		
244	2D	*	G01-2601-04	TORSION COIL SPRING		
245	2C	*	G01-2602-04	TORSION COIL SPRING		
246	2C	*	G01-2603-04	EXTENSION SPRING		
249	3C	*	G11-1519-04	CUSHION		
250	2C	*	G11-1520-04	CUSHION		
-		*	H01-9337-04	ITEM CARTON CASE		
-		*	H03-3396-04	OUTER CARTON CASE		
-		*	H10-4393-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0329-04	PROTECTION BAG (280X450X0.03)		
-			H25-0336-04	PROTECTION BAG (170X250X0.03)		
261	2C	*	J19-4430-13	HOLDER		
262	3D	*	J19-4431-04	LEAD HOLDER		
263	2C	*	J19-4435-04	LEAD HOLDER		
264	1C	*	J21-7088-71	MOUNTING HARDWARE		
265	1C	*	J26-4003-05	PRINTED WIRING BOARD ASSY		

E: Scandinavia & Europe K: USA P: Canada W: Europe

Y: PX(Far East, Hawaii) T: England M: Other Areas

Y: AAFES(Europe) X: Australia

KRC-953R

KRC-953R

PARTS LIST

× New Parts
Parts without Parts No. are not supplied.
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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
266 267	2D 1C	*	J52-0033-03 J54-0059-04	MAGNET CATCH STAY		
270 271 272 273 274	3C 3C 3C 3C 3C	 * * * *	K23-1014-03 K24-0987-04 K24-0988-04 K24-0989-04 K24-0990-04	KNØB (VØL) KNØB (EJECT) KNØB (TUNER) KNØB (TI...) KNØB (RESET)		
275 276 277 278 279	3C 3C 3C 3C 3C	* * * * *	K24-0991-03 K24-0992-03 K24-0993-04 K24-0994-04 K24-0995-03	KNØB (PWR) KNØB (ATT) KNØB (BAL, FAD) KNØB (TØNE) KNØB (1, B.C)		
280 281 282 283 284	3C 3C 3C 3C 3C	* * 	K24-0996-03 K24-0997-03 K24-0998-03 K24-0999-03 K24-1000-03	KNØB (2, BS) KNØB (3, REP) KNØB (4, SCN) KNØB (5, DS-TC) KNØB (6, RDM)		
285 286 287 288 289	3C 3C 3C 3C 3C	* * * * *	K24-1006-14 K24-1007-04 K24-1009-04 K25-0605-03 K25-0606-13	KNØB (CD) KNØB (PRØ) KNØB (RDS) KNØB (AM, FM) KNØB (DPSS)		
290	3D		K27-3526-04	KNØB (LEVER)		
293 A B C D	1C 2C, 3C 2C 2C 1C, 2C		N99-1570-05 N09-1492-05 N19-1105-04 N19-2031-04 N80-2004-46	SCREW SET MACHINE SCREW (2.6X3.5) FLAT WASHER FLAT WASHER PAN HEAD TAPTITE SCREW		
E F G H J	2C 2C 2C 2C 1D, 3D	 *	N80-2006-45 N80-2006-46 N80-2010-46 N83-2006-46 N83-3005-46	PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW		
K	2D		N86-2004-46	BINDING HEAD TAPTITE SCREW		
PSW1	2C		S40-1112-05	PUSH SWITCH		
ME1	1D	*	X92-1710-05	MECHANISM ASSY		
SUB-CIRCUIT UNIT (X13-6410-00)						
C1			CF92V1H224J	MF 0.22UF J		
S1 S2 -4			S40-1140-05 S46-1601-05	PUSH SWITCH LEAF SWITCH		
PHØT1, 2 PHØT3			T95-0201-05 T95-0202-05	ØPTØ ISØLATØR ØPTØ ISØLATØR		
SYNTHESIZER UNIT (X14-3422-70)						
C1 C3 C5 ,6 C7 ,8 C9			C90-2537-05 CE04DW1C102M CK73FB1H103K CE04CW1A101M CE04CW1A220M	ELECTRØ 2200UF 16WV ELECTRØ 1000UF 16WV CHIP C 0.010UF K ELECTRØ 100UF 10WV ELECTRØ 22UF 10WV		
C10 C11			C90-2559-05 C90-2558-05	ELECTRØ 0.47UF 50WV ELECTRØ 1UF 50WV		

E: Scandinavia & Europe K: USA P: Canada W: Europe
Y: PX(Far East, Hawaii) T: England M: Other Areas
Y: AAFES(Europe) X: Australia

⚠ indicates safety critical components.

PARTS LIST

× New Parts
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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C12 C13 C14 C15 C16 ,17			CK73FB1H103K C90-2673-05 CK73FB1H223KTA C90-2530-05 CK73FB1H223KTA	CHIP C 0.010UF K ELECTRØ 220UF 10WV CHIP C 0.022UF K ELECTRØ 47UF 16WV CHIP C 0.022UF K		
C18 C19 ,20 C21 ,22 C23 ,24 C25 ,26			C90-2673-05 C90-2530-05 CK73FB1H223KTA CE04NW1A470M C93-0025-05	ELECTRØ 220UF 10WV ELECTRØ 47UF 16WV CHIP C 0.022UF K ELECTRØ 47UF 10WV CERAMIC 0.22UF K		
C28 C29 C30 C31 ,32 C33			CK73FB1H103K CK73EB1E104K C92-0004-05 C90-2535-05 CE04NWØJ221M	CHIP C 0.010UF K CHIP C 0.10UF K ELECTRØ 1.0UF 16WV ELECTRØ 4.7UF 16WV ELECTRØ 220UF 6.3WV		
C34 ,35 C36 C37 C38 C39 ,40			CE04NWØJ470M CE04CW1V4R7M CK73FB1E473KTA CE04NW1C100M CK73FB1H223KTA	ELECTRØ 47UF 6.3WV ELECTRØ 4.7UF 35WV CHIP C 0.047UF K ELECTRØ 10UF 16WV CHIP C 0.022UF K		
C42 C43 C44 C45 C46			CK73FB1H223KTA CE04CWØJ101M CK73FB1H223KTA CE04NWØJ470M C92-0509-05	CHIP C 0.022UF K ELECTRØ 100UF 6.3WV CHIP C 0.022UF K ELECTRØ 47UF 6.3WV TANTAL 10UF 6.3WV		
C47 C48 C49 ,50 C51 C52 ,53			C90-1827-05 CK73FB1H223KTA CC73FCH1H10ØD CK73FB1H103K CK73FB1H223KTA	BACKUP 0.047F 5.5WV CHIP C 0.022UF K CHIP C 10PF D CHIP C 0.010UF K CHIP C 0.022UF K		
C54 C55 C56 C57 C58			CE04CWØJ470M CK73FB1H223KTA CE04CWØJ470M CK73FB1H223KTA CE04NW1C470M	ELECTRØ 47UF 6.3WV CHIP C 0.022UF K ELECTRØ 47UF 6.3WV CHIP C 0.022UF K ELECTRØ 47UF 16WV		
C59 C60 ,61 C62 ,63 C64 C65			CK73FB1H223KTA C93-0025-05 CK73FB1H103K CE04CWØJ470M CE04CWØJ220M	CHIP C 0.022UF K CERAMIC 0.22UF K CHIP C 0.010UF K ELECTRØ 47UF 6.3WV ELECTRØ 22UF 6.3WV		
C66 C67 ,68 C69 ,70 C71 -74 C75 ,76			CE04CW1A470M CC73FCH1H15ØJ CK73FB1H223KTA CK73FB1H271K CE04CW1A330M	ELECTRØ 47UF 10WV CHIP C 15PF J CHIP C 0.022UF K CHIP C 270PF K ELECTRØ 33UF 10WV		
C77 ,78 C79 C80 C81 ,82 C83 ,84			CK73FB1H103K CE04CW1A220M CK73FB1H102K CC73FCH1H1Ø1J C90-2535-05	CHIP C 0.010UF K ELECTRØ 22UF 10WV CHIP C 1000PF K CHIP C 100PF J ELECTRØ 4.7UF 16WV		
C85 C86 C87 C88 C89			C90-2604-05 C90-2597-05 CE04CW1H3R3M C90-2604-05 CE04CW1A101M	ELECTRØ 0.22UF 50WV ELECTRØ 10UF 16WV ELECTRØ 3.3UF 50WV ELECTRØ 0.22UF 50WV ELECTRØ 100UF 10WV		

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C91 ,92 C95 ,96 C97 ,98 C99 ,100 C101			CK73FB1H153K C90-2658-05 CC73FCH1H270J CC73FCH1H101J CK73FB1H223KTA	CHIP C 0.015UF K NP-ELECT 1UF 50WV CHIP C 27PF J CHIP C 100PF J CHIP C 0.022UF K		
C102 C103 C104 C105,106 C107			CK73FB1H103K CK73FB1H223KTA CE04CW1A220M CE04CW1A101M CK73FB1H223KTA	CHIP C 0.010UF K CHIP C 0.022UF K ELECTRO 22UF 10WV ELECTRO 100UF 10WV CHIP C 0.022UF K		
C108 C109 C110,111 C112 C113			CE04CW1A101M C93-1031-05 C93-1032-05 CK73FB1H681K CK73FB1H392K	ELECTRO 100UF 10WV CERAMIC 0.01UF K CERAMIC 0.1UF K CHIP C 680PF K CHIP C 3900PF K		
C114 C115 C116 C117 C118			C93-1032-05 C93-1036-05 CK73FB1H223KTA CE04CW1A101M CK73FB1H103K	CERAMIC 0.1UF K CERAMIC 4700PF K CHIP C 0.022UF K ELECTRO 100UF 10WV CHIP C 0.010UF K		
C119 C120 C121,122 C123 C124			C90-2525-05 CK73EB1E683K CK73FB1H223KTA CK73FB1H103K CK73FB1H392K	NP-ELECT 2.2UF 35WV CHIP C 0.068UF K CHIP C 0.022UF K CHIP C 0.010UF K CHIP C 3900PF K		
C131-133 C134 C135,136 C137 C138			CK73FB1H223KTA CE04NW1A101M CK73FB1H223KTA CE04NW1H0R1M CE04NW1H010M	CHIP C 0.022UF K ELECTRO 100UF 10WV CHIP C 0.022UF K ELECTRO 0.1UF 50WV ELECTOR 1.0UF 50WV		
C139,140 C141 C142 C143 C144			CK73EB1E104K CC73FCH1H220J C92-0004-05 CC73FCH1H221J CK73EB1E104K	CHIP C 0.10UF K CHIP C 22PF J ELECTRO 1.0UF 16WV CHIP C 220PF J CHIP C 0.10UF K		
C145,146 C147 C148 C149,150 C151			CK73EB1H473K CE04NW1C100M CK73FB1H222K CK73FB1H223KTA CE04NW1A101M	CHIP C 0.047UF K ELECTRO 10UF 16WV CHIP C 2200PF K CHIP C 0.022UF K ELECTRO 100UF 10WV		
C152 C153 C154 C155 C156			CK73EB1H473K C92-0003-05 CK73EB1E104K CE04NW1H010M CK73FB1H102K	CHIP C 0.047UF K CHIP TAN 0.47UF 25WV CHIP C 0.10UF K ELECTOR 1.0UF 50WV CHIP C 1000PF K		
C157 C158 C159 C160 C162,163			CK73EB1E104K CE04NW1C100M CE04NW1HR22M CK73EB1H333K CE04NW1H010M	CHIP C 0.10UF K ELECTRO 10UF 16WV ELECTRO 0.22UF 50WV CHIP C 0.033UF K ELECTOR 1.0UF 50WV		
C164 C165 C166,167 C168 C171			CK73EB1H473K CK73EB1E104K CK73FB1H472K CK73FB1H561K CE04NW1A330M	CHIP C 0.047UF K CHIP C 0.10UF K CHIP C 4700PF K CHIP C 560PF K ELECTRO 33UF 10WV		

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C172 C173 C174,175 C176 C177			CK73FB1H103K CC73FCH1H560J CF92V1H683J C93-0024-05 CE04NW1E4R7M	CHIP C 0.010UF K CHIP C 56PF J MF 0.068UF J CERAMIC 0.15UF 16WV ELECTRO 4.7UF 25WV		
C178 C179 C180 C181,182 C183			CQ93HP2A332J CE04NW1C100M CK73EB1E104K C93-0026-05 CK73FB1H103K	MYLAR 3300PF J ELECTRO 10UF 16WV CHIP C 0.10UF K CHIP C 0.068UF 50WV CHIP C 0.010UF K		
C184,185 C186			C93-0026-05 CE04NW1C100M	CHIP C 0.068UF 50WV ELECTRO 10UF 16WV		
WH1	2D	*	E30-3780-05	CORD WITH PLUG		
LH1 -5			J19-4316-05	HOLDER		
CF1 ,2 L1 L2 L3 L4		*	L72-0716-05 L40-4701-12 L40-1001-16 L40-1011-16 L40-4791-11	CERAMIC FILTER SMALL FIXED INDUCTOR SMALL FIXED INDUCTOR(10UH,K) SMALL FIXED INDUCTOR(100UH,K) SMALL FIXED INDUCTOR		
L5 -7 L8 L9 L10 ,11 L12			L40-4791-16 L39-0136-15 L40-1001-16 L40-4791-16 L40-2291-31	SMALL FIXED INDUCTOR(4.7UH,K) TRAP COIL SMALL FIXED INDUCTOR(10UH,K) SMALL FIXED INDUCTOR(4.7UH,K) SMALL FIXED INDUCTOR(2.2UH)		
L13 T1 X1 X2 X3			L39-0156-05 L30-0715-05 L77-2003-05 L78-0267-05 L78-0503-05	TRAP COIL FM IFT CRYSTAL RESONATOR(8.388608MHZ) RESONATOR (4.19MHZ) RESONATOR (4.00MHZ)		
X4 X5			L77-1166-05 L78-0506-05	CRYSTAL RESONATOR RESONATOR		
J L	2D 2D		N83-3005-46 N83-3006-46	PAN HEAD TAPTITE SCREW PAN HEAD TAPTITE SCREW		
R1 R2 R3 R4 R5			RK73FB2A512J RK73FB2A622J RK73FB2A512J RK73FB2A622J RK73FB2A104J	CHIP R 5.1K J 1/10W CHIP R 6.2K J 1/10W CHIP R 5.1K J 1/10W CHIP R 6.2K J 1/10W CHIP R 100K J 1/10W		
R6 ,7 R8 R9 R10 R11			RK73FB2A223J RK73FB2A181J RK73FB2A101J RK73FB2A273J RK73FB2A512J	CHIP R 22K J 1/10W CHIP R 180 J 1/10W CHIP R 100 J 1/10W CHIP R 27K J 1/10W CHIP R 5.1K J 1/10W		
R12 R13 R14 R15 R16 -18			R92-2104-05 RK73FB2A103J RK73FB2A153J RK73FB2A222J RK73FB2A472J	CHIP R 2.2 J 1W CHIP R 10K J 1/10W CHIP R 15K J 1/10W CHIP R 2.2K J 1/10W CHIP R 4.7K J 1/10W		
R19 ,20 R21 R22 R23			RK73FB2A103J RK73FB2A123J RK73FB2A103J RK73FB2A223J	CHIP R 10K J 1/10W CHIP R 12K J 1/10W CHIP R 10K J 1/10W CHIP R 22K J 1/10W		

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R109			RK73FB2A104J	CHIP R 100K J 1/10W		
R110-113			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R116, 117			RK73FB2A104J	CHIP R 100K J 1/10W		
R118			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R119, 120			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R121			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R122-124			RK73FB2A104J	CHIP R 100K J 1/10W		
R125			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R126			RK73FB2A220J	CHIP R 22 J 1/10W		
R127			RK73FB2A104J	CHIP R 100K J 1/10W		
R131, 132			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R133			RK73EB2B222J	CHIP R 2.2K J 1/8W		
R134			RK73FB2A104J	CHIP R 100K J 1/10W		
R135-138			RK73EB2B222J	CHIP R 2.2K J 1/8W		
R139			RK73EB2B104J	CHIP R 100K J 1/8W		
R140, 141			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R142, 143			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R144			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R145			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R146			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R147			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R148-156			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R157			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R158, 159			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R160, 161			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R162-168			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R169			RK73FB2A104J	CHIP R 100K J 1/10W		
R170			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R171, 172			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R173			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R174, 175			RK73FB2A104J	CHIP R 100K J 1/10W		
R176, 177			RK73EB2B222J	CHIP R 2.2K J 1/8W		
R178			RK73FB2A104J	CHIP R 100K J 1/10W		
R181			RK73FB2A104J	CHIP R 100K J 1/10W		
R182			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R183			RK73FB2A104J	CHIP R 100K J 1/10W		
R184-187			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R188			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R189			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R190			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R191			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R192			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R193			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R194			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R195			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R196			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R197			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R198-201			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R202			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R203, 204			RK73FB2A104J	CHIP R 100K J 1/10W		
R211			RK73FB2A100J	CHIP R 10 J 1/10W		
R212, 213			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R214			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R222			R92-2023-05	CHIP R 820 J 1/2W		
R223			RK73FB2A331J	CHIP R 330 J 1/10W		

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R24			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R25 ,26			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R27			RK73EB2B153J	CHIP R 15K J 1/8W		
R28 ,29			RK73EB2B130J	CHIP R 13 J 1/8W		
R30			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R31			RK73FB2A104J	CHIP R 100K J 1/10W		
R32			RK73FB2A471J	CHIP R 470 J 1/10W		
R33			RK73FB2A473J	CHIP R 47K J 1/10W		
R34			RK73EB2B103J	CHIP R 10K J 1/8W		
R35			RK73FB2A103J	CHIP R 10K J 1/10W		
R36			RK73FB2A473J	CHIP R 47K J 1/10W		
R37			RK73FB2A103J	CHIP R 10K J 1/10W		
R38 ,39			R92-2023-05	CHIP R 820 J 1/2W		
R40			RK73EB2B103J	CHIP R 10K J 1/8W		
R41			R92-0365-05	CHIP R 1K J 1/2W		
R42 ,43			RK73FB2A104J	CHIP R 100K J 1/10W		
R44 ,45			RK73FB2A134J	CHIP R 130K J 1/10W		
R46			RK73FB2A431J	CHIP R 430 J 1/10W		
R47 -49			RK73FB2A104J	CHIP R 100K J 1/10W		
R50			RK73FB2A103J	CHIP R 10K J 1/10W		
R51			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R52			RK73FB2A103J	CHIP R 10K J 1/10W		
R53			RK73FB2A101J	CHIP R 100 J 1/10W		
R54			RK73FB2A103J	CHIP R 10K J 1/10W		
R55 ,56			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R57 ,58			RK73FB2A104J	CHIP R 100K J 1/10W		
R59			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R60			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R61			RK73FB2A103J	CHIP R 10K J 1/10W		
R62			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R63			RK73FB2A104J	CHIP R 100K J 1/10W		
R64			RK73FB2A101J	CHIP R 100 J 1/10W		
R65			RK73FB2A103J	CHIP R 10K J 1/10W		
R66			RK73FB2A101J	CHIP R 100 J 1/10W		
R67			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R68 -70			RK73FB2A104J	CHIP R 100K J 1/10W		
R71 ,72			R92-0686-05	CHIP R 33 J 1/2W		
R73			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R74 ,75			RK73FB2A103J	CHIP R 10K J 1/10W		
R76			RK73FB2A224J	CHIP R 220K J 1/10W		
R77 ,78			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R79			RK73FB2A103J	CHIP R 10K J 1/10W		
R80			RK73FB2A104J	CHIP R 100K J 1/10W		
R81 ,82			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R83 ,84			RK73FB2A104J	CHIP R 100K J 1/10W		
R85			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R86 ,87			RK73FB2A104J	CHIP R 100K J 1/10W		
R88 -91			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R92			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R93			RK73EB2B471J	CHIP R 470 J 1/8W		
R94			RK73FB2A153J	CHIP R 15K J 1/10W		
R98			RK73FB2A104J	CHIP R 100K J 1/10W		
R99 -102			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R103			RK73FB2A104J	CHIP R 100K J 1/10W		
R104-108			RK73FB2A222J	CHIP R 2.2K J 1/10W		

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R224			RK73FB2A183J	CHIP R 18K J 1/10W		
R225			RS14DB3D330J	FL-PROOF RS 33 J 2W		
R226			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R227			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R229, 230			RK73FB2A223J	CHIP R 22K J 1/10W		
R233, 234			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R241-244			RK73FB2A183J	CHIP R 18K J 1/10W		
R245, 246			RK73FB2A121J	CHIP R 120 J 1/10W		
R247, 248			RK73FB2A334J	CHIP R 330K J 1/10W		
R249, 250			RK73FB2A153J	CHIP R 15K J 1/10W		
R251, 252			RK73FB2A223J	CHIP R 22K J 1/10W		
R253			RK73FB2A561J	CHIP R 560 J 1/10W		
R254			RK73FB2A470J	CHIP R 47 J 1/10W		
R255			RK73FB2A333J	CHIP R 33K J 1/10W		
R256, 257			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R258			RK73FB2A223J	CHIP R 22K J 1/10W		
R259			RK73FB2A103J	CHIP R 10K J 1/10W		
R260			RK73FB2A104J	CHIP R 100K J 1/10W		
R261			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R262			RK73EB2B2R2J	CHIP R 2.2 J 1/8W		
R263, 264			RK73FB2A362J	CHIP R 3.6K J 1/10W		
R265, 266			RK73FB2A223J	CHIP R 22K J 1/10W		
R267, 268			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R269			RK73FB2A103J	CHIP R 10K J 1/10W		
R270			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R271			RK73FB2A683J	CHIP R 68K J 1/10W		
R272			RK73FB2A563J	CHIP R 56K J 1/10W		
R273			RK73FB2A473J	CHIP R 47K J 1/10W		
R274			RK73FB2A223J	CHIP R 22K J 1/10W		
R275			RK73FB2A473J	CHIP R 47K J 1/10W		
R276			RK73FB2A103J	CHIP R 10K J 1/10W		
R277, 278			RK73FB2A473J	CHIP R 47K J 1/10W		
R279			RK73FB2A104J	CHIP R 100K J 1/10W		
R280			RK73FB2A473J	CHIP R 47K J 1/10W		
R281-283			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R284-287			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R288, 289			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R290, 291			RK73FB2A103J	CHIP R 10K J 1/10W		
R292			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R293			RK73EB2B100J	CHIP R 10 J 1/8W		
R294			RK73EB2B222J	CHIP R 2.2K J 1/8W		
R295			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R296			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R297			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R298			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R299			RK73FB2A242J	CHIP R 2.4K J 1/10W		
R300			RK73EB2B220J	CHIP R 22 J 1/8W		
R301			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R302			RK73EB2B101J	CHIP R 100 J 1/8W		
R303			RK73FB2A362J	CHIP R 3.6K J 1/10W		
R304			RK73FB2A183J	CHIP R 18K J 1/10W		
R305			RK73EB2B101J	CHIP R 100 J 1/8W		
R306, 307			RK73FB2A223J	CHIP R 22K J 1/10W		
R308			RK73EB2B331J	CHIP R 330 J 1/8W		
R309, 310			R92-0685-05	CHIP R 22 J 1/2W		

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R321			RK73FB2A100J	CHIP R 10 J 1/10W		
R322			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R323			RK73FB2A561J	CHIP R 560 J 1/10W		
R324			RK73FB2A331J	CHIP R 330 J 1/10W		
R325			RK73FB2A270J	CHIP R 27 J 1/10W		
R326			RK73FB2A271J	CHIP R 270 J 1/10W		
R327			RK73FB2A331J	CHIP R 330 J 1/10W		
R328			RK73FB2A103J	CHIP R 10K J 1/10W		
R329			RK73FB2A133J	CHIP R 13K J 1/10W		
R330			RK73FB2A751J	CHIP R 750 J 1/10W		
R331			RK73FB2A152J	CHIP R 1.5K J 1/10W		
R332			RK73FB2A104J	CHIP R 100K J 1/10W		
R333			RK73FB2A474J	CHIP R 470K J 1/10W		
R334			RK73FB2B104J	CHIP R 100K J 1/8W		
R335			RK73FB2A103J	CHIP R 10K J 1/10W		
R336			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R337			RK73FB2A473J	CHIP R 47K J 1/10W		
R339			RK73FB2A683J	CHIP R 68K J 1/10W		
R340			RK73FB2A100J	CHIP R 10 J 1/10W		
R341			RK73FB2A103J	CHIP R 10K J 1/10W		
R342			RK73FB2A223J	CHIP R 22K J 1/10W		
R343			RK73FB2A103J	CHIP R 10K J 1/10W		
R344			RK73FB2A223J	CHIP R 22K J 1/10W		
R345			RK73FB2A563J	CHIP R 56K J 1/10W		
R346, 347			RK73FB2A103J	CHIP R 10K J 1/10W		
R348			RK73FB2A682J	CHIP R 6.8K J 1/10W		
R349			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R350			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R351			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R353			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R361			RK73FB2A333J	CHIP R 33K J 1/10W		
R362			RK73FB2A123J	CHIP R 12K J 1/10W		
R363			RK73FB2A244J	CHIP R 240K J 1/10W		
R364			RK73FB2A2R2J	CHIP R 2.2 J 1/10W		
R365			RK73FB2B224J	CHIP R 220K J 1/8W		
R366			RK73FB2A684J	CHIP R 680K J 1/10W		
R367			RK73FB2A473J	CHIP R 47K J 1/10W		
R368			RK73FB2A431J	CHIP R 430 J 1/10W		
R369			RK73FB2A104J	CHIP R 100K J 1/10W		
R370			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R371			RK73FB2A683J	CHIP R 68K J 1/10W		
R372			RK73FB2A564J	CHIP R 560K J 1/10W		
R373			RK73FB2A101J	CHIP R 100 J 1/10W		
R374			RK73FB2A563J	CHIP R 56K J 1/10W		
R375			RK73FB2A273J	CHIP R 27K J 1/10W		
R376			RK73FB2A474J	CHIP R 470K J 1/10W		
VR1			R12-3686-05	TRIMMING POT.(22K)		
VR11			R12-3100-05	TRIMMING POT.(10K)		
VR12, 13			R12-3685-05	TRIMMING POT.(10K)		
VR14			R12-3100-05	TRIMMING POT.(10K)		
VR15			R12-3101-05	TRIMMING POT.(22K)		
VR16			R12-0096-05	TRIMMING POT.(220)		
W2 , 3			R92-2052-05	CHIP R 0 J 1/10W		
W4 -10			R92-2053-05	CHIP R 0 J 1/8W		
W12			R92-2052-05	CHIP R 0 J 1/10W		

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W16			R92-2052-05	CHIP R 0 J 1/10W		
W18 -20			R92-2053-05	CHIP R 0 J 1/8W		
W26 ,27			R92-2053-05	CHIP R 0 J 1/8W		
W28			R92-2052-05	CHIP R 0 J 1/10W		
W30			R92-2052-05	CHIP R 0 J 1/10W		
W31 ,32			R92-2053-05	CHIP R 0 J 1/8W		
W35			R92-2052-05	CHIP R 0 J 1/10W		
D1 ,2			MA8082-M	ZENER DIODE		
D3			MA110	DIODE		
D4			DAN202K	DIODE		
D5			MA110	DIODE		
D7			DA204K	DIODE		
D8			MA8051-M	ZENER DIODE		
D9			MA8110-M	ZENER DIODE		
D10			MA110	DIODE		
D11			DAP202K	DIODE		
D12 ,13			MA110	DIODE		
D14			ERA15-01Y1	DIODE		
D15 ,16			DAN202K	DIODE		
D17 -19			MA110	DIODE		
D21			DAP202K	DIODE		
D22 -25			MA110	DIODE		
D26 ,27			MA8120-M	ZENER DIODE		
D28			MA8062-M	ZENER DIODE		
D31			DAN202K	DIODE		
D32			MA8091-M	ZENER DIODE		
D33			MA110	DIODE		
D34			MA8056-M	ZENER DIODE		
D35 ,36			ERA15-01Y1	DIODE		
D37 ,38			MA110	DIODE		
D39			MA8091-M	ZENER DIODE		
D40			DA204K	DIODE		
D41			MA110	DIODE		
D51			MA110	DIODE		
IC1 ,2			PST572DMT	IC(SYSTEM RESET)		
IC3			M5237L	IC(VOLTAGE REGULATOR)		
IC4			TA78L005AP	IC(VOLTAGE REGULATOR/ +5V)		
IC5			TA79L005P	IC(VOLTAGE REGULATOR/ -5V)		
IC6			M5280FP	IC		
IC7			PST529F-MT	IC		
IC8			TC74HC04AF	IC(INVERTER)		
IC11		*	CXP81316-327Q	IC		
IC12		*	75004GB-772-3B4	IC		
IC13		*	S-2510A	IC		
IC14			LC6543H-4600	IC		
IC15			HFE210F002A1	IC		
IC16			TA7291P	IC(MOTOR DRIVER)		
IC17			BA3430FS	IC(STEREO PRE AMPLIFIER)		
IC18			LC7218M	IC		
IC19			TC4066BF	IC(BILATERAL SWITCH X4)		
IC21			KKC03	IC		
IC22			TC4S66F	IC(BILATERAL SWITCH)		
IC23			TDA1579T	IC(DECODER)		
IC24			NJM4565M	IC		

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Q1			2SB1370	TRANSISTOR		
Q2			DTA114EK	DIGITAL TRANSISTOR		
Q3			2SB1370	TRANSISTOR		
Q4			2SC2412K	TRANSISTOR		
Q5			2SB1370	TRANSISTOR		
Q6			2SC2412K	TRANSISTOR		
Q7			DTA114EK	DIGITAL TRANSISTOR		
Q8			DTC144EK	DIGITAL TRANSISTOR		
Q9 -11			2SA1037K	TRANSISTOR		
Q12 -15			DTA124EK	DIGITAL TRANSISTOR		
Q18			DTA124EK	DIGITAL TRANSISTOR		
Q19			2SA1037K	TRANSISTOR		
Q20			DTC124EK	DIGITAL TRANSISTOR		
Q21			DTC144EK	DIGITAL TRANSISTOR		
Q22			DTB123YK	DIGITAL TRANSISTOR		
Q23			DTC144EK	DIGITAL TRANSISTOR		
Q24			DTA124EK	DIGITAL TRANSISTOR		
Q25 ,26			DTC144EK	DIGITAL TRANSISTOR		
Q27 ,28			2SC2412K	TRANSISTOR		
Q29			2SA1428	TRANSISTOR		
Q30			DTC114EK	DIGITAL TRANSISTOR		
Q31 ,32			2SC2412K	TRANSISTOR		
Q35 ,36			DTA114EK	DIGITAL TRANSISTOR		
Q41 -43			DTC144EK	DIGITAL TRANSISTOR		
Q44 ,45			2SC2412K	TRANSISTOR		
Q46			DTC124EK	DIGITAL TRANSISTOR		
Q47 ,48			DTD123YK	DIGITAL TRANSISTOR		
Q49 ,50			2SB1277(Q,R)	TRANSISTOR		
Q51			DTB123YK	DIGITAL TRANSISTOR		
Q52			DTC124EK	DIGITAL TRANSISTOR		
Q53			2SC2412K	TRANSISTOR		
Q54			DTC144EK	DIGITAL TRANSISTOR		
Q61			DTB123YK	DIGITAL TRANSISTOR		
Q62			2SA1408(O)	TRANSISTOR		
Q64			DTC124EK	DIGITAL TRANSISTOR		
Q65 ,66			DTC144EK	DIGITAL TRANSISTOR		
Q67 ,68			DTA144EK	DIGITAL TRANSISTOR		
Q70			2SA1037K	TRANSISTOR		
Q71 -73			2SC2412K	TRANSISTOR		
Q74 ,75			DTA124EK	DIGITAL TRANSISTOR		
Q76 ,77			2SB822F	TRANSISTOR		
Q78			DTC124EK	DIGITAL TRANSISTOR		
Q79			2SK669	FET		
Q80 ,81			DTC144EK	DIGITAL TRANSISTOR		
Q82			2SK669	FET		
Q83			2SA1037K	TRANSISTOR		
Q91			2SC2413K	TRANSISTOR		
Q92			DTC124EK	DIGITAL TRANSISTOR		
Q93			2SC2412K	TRANSISTOR		
Q94			DTC114TK	DIGITAL TRANSISTOR		
DC/DC		*	W02-1335-05	ELECTRIC CIRCUIT MODULE		
TU1		*	W02-1336-05	FM/AM FRONT-END		
SWITCH UNIT (X25-4742-70)						
D1 -3			B30-1349-05	LED		

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LCD1 PL1 PL2 ,3 PL4	3C	*	B38-0549-05 B30-1305-05 B30-1306-05 B30-1305-05	LIQUID CRYSTAL LAMP (5.5V .125A) LAMP (5.5V .125A) LAMP (5.5V .125A)		
C1 C2 C3 C4 C5 ,6			CK73EB1H103K CK73FB1H681K CK73EB1H103K CK73FB1H681K CC73FCH1H220J	CHIP C 0.01UF K CHIP C 680PF K CHIP C 0.01UF K CHIP C 680PF K CHIP C 22PF J		
C7 C8 C9			C92-0005-05 C92-0509-05 C92-0005-05	ELECTRØ 2.2UF 6.3WV TANTAL 10UF 6.3WV ELECTRØ 2.2UF 6.3WV		
- -	3C	*	E29-1361-04 E59-0806-05	CONDUCTIVE RUBBER RECTANGULAR PLUG (15P)		
X1			L78-0505-05	RESONATOR		
R1 R2 -4 R5 R6 R7			RK73EB2B102J RK73FB2A102J RK73EB2B471J RK73FB2A331J RK73EB2B471J	CHIP R 1.0K J 1/8W CHIP R 1.0K J 1/10W CHIP R 470 J 1/8W CHIP R 330 J 1/10W CHIP R 470 J 1/8W		
R8 ,9 R10 R11 -14 R15 ,16 R17			RK73FB2A513J RK73FB2A104J RK73FB2A102J RK73EB2B472J RK73FB2A103J	CHIP R 51K J 1/10W CHIP R 100K J 1/10W CHIP R 1.0K J 1/10W CHIP R 4.7K J 1/8W CHIP R 10K J 1/10W		
R18 ,19 R20 R21 R22 R23			RK73EB2B103J RK73EB2B332J RK73FB2A332J RK73FB2A331J RK73EB2B471J	CHIP R 10K J 1/8W CHIP R 3.3K J 1/8W CHIP R 3.3K J 1/10W CHIP R 330 J 1/10W CHIP R 470 J 1/8W		
R24 ,25 R26 R27 ,28 R29 R31 ,32			RK73FB2A331J RK73EB2B471J RK73FB2A331J RK73FB2A472J RK73FB2A101J	CHIP R 330 J 1/10W CHIP R 470 J 1/8W CHIP R 330 J 1/10W CHIP R 4.7K J 1/10W CHIP R 100 J 1/10W		
R33 -37 R38			RK73FB2A102J RK73FB2A103J	CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W		
S1 -8 S9 S10 -24			S40-1606-05 S40-1607-05 S40-1606-05	PUSH SWITCH PUSH SWITCH PUSH SWITCH		
S25		*	T99-0405-05	SPEED DETECTOR		
IC1 IC2 IC3 IC4 ,5 Q1		*	75004GB-773-3B4 PST572DMT RS-21 LC7582A DTB123YK	IC IC(SYSTEM RESET) IC IC(LCD DRIVER) DIGITAL TRANSISTOR		
Q2 Q3 ,4 Q5		*	DTC124EK 2SB1188 DTC144EK	DIGITAL TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR		
DAUGHTER UNIT (X89-1372-70)						
PL1			B30-1354-05	LAMP (5.5V,125MA)		

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C1 -6 C7 -10 C11 ,12 C13 ,14 C17 ,18			CK73FB1H222K CK73EB1E104K CE04NW1H010M CE04NW0J470M CK73FB1H272K	CHIP C 2200PF K CHIP C 0.10UF K ELECTOR 1.0UF 50WV ELECTRO 47UF 6.3WV CHIP C 2700PF K		
C19 -22 C23 ,24 C31 ,32 C33 ,34 C35 -40			C90-2595-05 CE04CWOJ470M CK73FB1H152K CK73EB1E104K C90-2595-05	ELECTRO 4.7UF 16WV ELECTRO 47UF 6.3WV CHIP C 1500PF K CHIP C 0.10UF K ELECTRO 4.7UF 16WV		
C41 ,42 C43 ,44 C45 -48 C49 ,50 C51 ,52			CK73EB1H683K C92-0005-05 CK73EB1H333K CK73FB1H392K CK73FB1H102K	CHIP C 0.068UF K ELECTRO 2.2UF 6.3WV CHIP C 0.033UF K CHIP C 3900PF K CHIP C 1000PF K		
C53 ,54 C55 C56 C57 ,58 C59 ,60		*	C90-2595-05 CK73EF1C474Z CK73FB1H391K CE04CWOJ470M CE04NW1E4R7M	ELECTRO 4.7UF 16WV CHIP C 0.47UF Z CHIP C 390PF K ELECTRO 47UF 6.3WV ELECTRO 4.7UF 25WV		
C61 ,62 C63 ,64 C65 ,66 C67 ,68 C69 ,70			CK73FB1H222K CK73FB1H103K CE04NW1C100M CE04NW1E4R7M CK73FB1H222K	CHIP C 2200PF K CHIP C 0.010UF K ELECTRO 10UF 16WV ELECTRO 4.7UF 25WV CHIP C 2200PF K		
C71 ,72 C73 ,74 C75 ,76 C77 ,78 C79 ,80			CK73FB1H103K CE04NW1C100M C90-2595-05 CK73FB1H222K CK73FB1H103K	CHIP C 0.010UF K ELECTRO 10UF 16WV ELECTRO 4.7UF 16WV CHIP C 2200PF K CHIP C 0.010UF K		
C81 ,82 C83 -86 C101,102 C103 C104			CE04NW1C100M C90-2595-05 CK73EB1H223K CK73EB1H683K C92-0006-05	ELECTRO 10UF 16WV ELECTRO 4.7UF 16WV CHIP C 0.022UF K CHIP C 0.068UF K TANTAL 3.3UF 4WV		
C105 C106 C107,108 C109,110 C111			CK73FB1E273KTA CK73EB1E104K CK73EB1H473K CK73FB1H223KTA CE04NW1A101M	CHIP C 0.027UF K CHIP C 0.10UF K CHIP C 0.047UF K CHIP C 0.022UF K ELECTRO 100UF 10WV		
C112 C113 C114 C115 C116			CE04NW0J101M CK73FB1H822K CC73FCH1H101J CK73FB1H822K CK73FB1H221K	ELECTRO 100UF 6.3WV CHIP C 8200PF K CHIP C 100PF J CHIP C 8200PF K CHIP C 220PF K		
C117 C118 C119			CE04NW1E4R7M C92-0009-05 C92-1023-05	ELECTRO 4.7UF 25WV CHIP TAN 4.7UF 10WV ELECTRO 22UF 4.0WV		
R1 ,2 R3 ,4 R5 ,6 R7 R9 ,10 R11 ,12			RK73FB2A562J RK73FB2A223J RK73FB2A561J RK73FB2A183J RK73FB2A392J RK73FB2A102J	CHIP R 5.6K J 1/10W CHIP R 22K J 1/10W CHIP R 560 J 1/10W CHIP R 18K J 1/10W CHIP R 3.9K J 1/10W CHIP R 1.0K J 1/10W		

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R13 ,14 R15 ,16 R17 ,18 R23 ,24 R25 ,26			RK73FB2A472J RK73FB2A222J RK73FB2A472J RK73FB2A432J RK73FB2A204J	CHIP R 4.7K J 1/10W CHIP R 2.2K J 1/10W CHIP R 4.7K J 1/10W CHIP R 4.3K J 1/10W CHIP R 200K J 1/10W		
R27 -30 R31 ,32 R33 ,34 R35 ,36 R37 ,38			RK73FB2A474J RK73FB2A681J RK73FB2A473J RK73FB2A471J RK73FB2A473J	CHIP R 470K J 1/10W CHIP R 680 J 1/10W CHIP R 47K J 1/10W CHIP R 470 J 1/10W CHIP R 47K J 1/10W		
R39 ,40 R41 -44 R45 ,46 R47 ,48 R49 ,50			RK73FB2A471J RK73FB2A222J RK73FB2A474J RK73FB2A222J RK73FB2A102J	CHIP R 470 J 1/10W CHIP R 2.2K J 1/10W CHIP R 470K J 1/10W CHIP R 2.2K J 1/10W CHIP R 1.0K J 1/10W		
R51 ,52 R53 ,54 R55 R56 R57		*	RK73FB2A104J RK73FB2A102J RK73EB2B124J RK73EB2B103J RK73FB2A104J	CHIP R 100K J 1/10W CHIP R 1.0K J 1/10W CHIP R 120K J 1/8W CHIP R 10K J 1/8W CHIP R 100K J 1/10W		
R59 ,60 R61 ,62 R63 ,64 R65 ,66 R67 ,68			RK73EB2B473J RK73EB2B222J RK73FB2A222J RK73FB2A474J RK73EB2B473J	CHIP R 47K J 1/8W CHIP R 2.2K J 1/8W CHIP R 2.2K J 1/10W CHIP R 470K J 1/10W CHIP R 47K J 1/8W		
R69 ,70 R71 ,72 R73 ,74 R75 ,76 R77 -80			RK73EB2B222J RK73FB2A222J RK73FB2A474J RK73FB2A473J RK73FB2A222J	CHIP R 2.2K J 1/8W CHIP R 2.2K J 1/10W CHIP R 470K J 1/10W CHIP R 47K J 1/10W CHIP R 2.2K J 1/10W		
R81 ,82 R83 -88 R89 -94 R101 R102			RK73FB2A474J RK73FB2A101J RK73FB2A472J RK73FB2A103J RK73EB2B392J	CHIP R 470K J 1/10W CHIP R 100 J 1/10W CHIP R 4.7K J 1/10W CHIP R 10K J 1/10W CHIP R 3.9K J 1/8W		
R103 R104 R105 R106 R107			RK73FB2A392J RK73FB2A563J R92-0366-05 RK73FB2A103J RK73FB2A223J	CHIP R 3.9K J 1/10W CHIP R 56K J 1/10W CHIP R 560 J 1W CHIP R 10K J 1/10W CHIP R 22K J 1/10W		
R108,109 R110,111 R112,113 R114,115 R116			RK73FB2A152J RK73FB2A102J RK73FB2A333J RK73FB2A103J RK73FB2A101J	CHIP R 1.5K J 1/10W CHIP R 1.0K J 1/10W CHIP R 33K J 1/10W CHIP R 10K J 1/10W CHIP R 100 J 1/10W		
R117-120 R121 R122 R123,124 R125			RK73FB2A472J RK73FB2A102J RK73FB2A683J RK73FB2A473J RK73FB2A223J	CHIP R 4.7K J 1/10W CHIP R 1.0K J 1/10W CHIP R 68K J 1/10W CHIP R 47K J 1/10W CHIP R 22K J 1/10W		
R126 VR1 ,2 W2 ,3 W5 W8		*	RK73FB2A473J R12-3813-05 R92-2052-05 R92-2052-05 R92-2052-05	CHIP R 47K J 1/10W TRIMMING POT.(10K) CHIP R 0 J 1/10W CHIP R 0 J 1/10W CHIP R 0 J 1/10W		

E: Scandinavia & Europe K: USA P: Canada W: Europe

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PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
W12			R92-2052-05	CHIP R 0 J 1/10W		
W16			R92-2052-05	CHIP R 0 J 1/10W		
W17			R92-2053-05	CHIP R 0 J 1/8W		
D1 -3			ERA15-01Y1	DIODE		
D4 ,5			MA110	DIODE		
D6			DAP202K	DIODE		
D7			DAN202K	DIODE		
D8			DA204K	DIODE		
IC1			HA12161FP	IC		
IC2			NJM4580ED	CUSTOM IC		
IC4		*	TC9233FK	IC		
IC5 -10			NJM4580ED	CUSTOM IC		
IC11			NJM4565MD	IC(OP AMP X2)		
IC12-14			NJM5532MD	IC		
IC15,16			NJM4565MD	IC(OP AMP X2)		
Q1 ,2			2SD1757K	TRANSISTOR		
Q11			2SB1277(Q,R)	TRANSISTOR		
Q12			2SA1037K	TRANSISTOR		
Q13			DTA124EK	DIGITAL TRANSISTOR		
Q14 ,15			2SC2412K	TRANSISTOR		
MECHANISM ASS'Y (X92-1710-05)						
7	2A		B09-0504-14	CAP		
8	3A		D01-0601-13	FLYWHEEL ASSY		
14	1A		D10-2505-13	ARM ASSY		
16	1B		D10-2507-23	ARM ASSY		
21	1B		D10-2512-13	ARM		
23	2A		D10-2514-13	ARM		
24	3A		D10-2515-24	ARM ASSY		
26	3B		D10-2517-53	LEVER		
27	2B		D10-2518-33	LEVER		
28	1B		D10-2519-04	ARM ASSY		
30	1B		D10-2521-04	LEVER		
31	2A		D13-1001-04	GEAR ASSY		
34	3A		D13-1004-24	GEAR ASSY		
37	2B		D13-1007-24	GEAR		
38	1B		D13-1008-54	GEAR ASSY		
40	1B		D13-1010-14	GEAR		
41	1B		D13-1011-04	GEAR		
42	1B		D13-1012-04	GEAR		
43	1B		D13-1013-33	GEAR		
44	3A		D13-1015-24	GEAR		
45	2B		D13-1016-23	GEAR		
46	1B		D14-0601-13	PINCH ROLLER ASSY		
48	1A		D14-0603-13	PINCH ROLLER ASSY		
49	2B		D14-0604-04	ROLLER		
50	3B		D14-0605-04	ROLLER		
53	2A		D15-0901-14	PULLEY		
54	3B		D15-0902-34	PULLEY		
55	3A		D16-0601-04	BELT		
72	2A		D21-2018-14	SHAFT ASSY		
73	3B		F10-1716-24	SHIELDING PLATE		
80	2A		G01-2502-14	COMPRESSION SPRING		

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83	3A		G01-2505-24	EXTENSION SPRING		
84	1B		G01-2506-14	EXTENSION SPRING		
85	2A		G01-2507-14	TORSION COIL SPRING		
86	2A		G01-2508-24	TORSION COIL SPRING		
87	1B		G01-2509-14	TORSION COIL SPRING		
88	2B		G01-2510-24	TORSION COIL SPRING		
89	1B		G01-2511-24	EXTENSION SPRING		
91	1A		G09-2001-24	FORMED WIRE		
92	1B		G09-2002-24	FORMED WIRE		
103	2B		J19-4304-13	BRACKET		
105	1A	*	J19-4417-04	HOLDER ASSY		
B	2A		N39-1770-46	PAN HEAD MACHIN SCREW		
C	1A		N09-4005-05	MACHINE SCREW (M2)		
D	2B		N09-4006-15	MACHINE SCREW (M1.7)		
E	1A	*	N09-4061-05	MACHINE SCREW (M2X 4)		
F	2B		N38-2020-46	PAN HEAD MACHIN SCREW		
G	3A		N39-2022-46	PAN HEAD MACHIN SCREW		
H	1B, 2B		N35-2003-46	BINDING HEAD MACHIN SCREW		
J	2A, 2B		N86-2004-46	BINDING HEAD TAPTITE SCREW		
K	2A, 3B		N19-2003-04	FLAT WASHER		
L	1B, 2A		N19-2023-04	FLAT WASHER		
M	3B		N19-2005-04	FLAT WASHER		
N	2A		N19-2006-04	FLAT WASHER		
P	2B		N19-2008-04	FLAT WASHER		
Q	2A, 3A		N19-0373-04	FLAT WASHER		
S	2A		N29-0208-04	RETAINING RING (3)		
T	1B		N29-0205-04	RETAINING RING (1.5)		
U	3A		N29-0501-05	RETAINING RING		
W	1A		N19-1096-04	FLAT WASHER		
HD1	1A	*	T31-0213-05	PLAYBACK HEAD		
M1	2A		T42-0702-25	DC MOTOR		
M2	2B		T42-0704-15	DC MOTOR		

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SPECIFICATIONS

Specifications subject to change without notice.

FM Tuner Section

Frequency Range (200 kHz space).....	87.9 MHz~107.9 MHz
(50 kHz space).....	87.5 MHz~108.0 MHz
Usable Sensitivity	12.0 dBf (1.1 μ V/75 ohms)
50 dB Quieting Sensitivity	15.2 dBf (1.6 μ V/75 ohms)
Frequency Response (± 3 dB)	30 Hz~15 kHz
Signal to Noise Ratio	73 dB
Selectivity	100 dB
Capture Ratio	1.5 dB
Image Response Ratio.....	70 dB
IF Response Ratio.....	120 dB
Stereo Separation (1 kHz)	40 dB

AM Tuner Section

Frequency Range (10 kHz space).....	530 kHz~1,700 kHz
(9 kHz space).....	531 kHz~1,611 kHz
Usable Sensitivity	28 dB (30 μ V)

Cassette Deck Section

Tape Speed.....	4.76 cm/sec
Wow & Flutter (WRMS).....	0.08% (WRMS)
Fast Winding Time (C-60)	100 sec
Frequency Response (120 μ s).....	30 Hz~20 kHz (± 3 dB)
(70 μ s).....	30 Hz~21 kHz (± 3 dB)
Stereo Separation (1 kHz)	43 dB
Signal to Noise Ratio (Dolby NR OFF)	58 dB
(Dolby-B NR ON)	67 dB
(Dolby-C NR ON)	73 dB

Audio Section

Tone Action	Bass: 70 Hz ± 10 dB
	Mid-Bass: 200 Hz ± 10 dB
	Treble: 10 kHz ± 10 dB
Preout level/load	1,000 mV (MAX.)/10 kohms

General

Operating Voltage	14.4 V (11~16 V allowable)
Current Consumption	0.8 A at Rated Power
Installation size (W×H×D).....	182×52×154 mm
	(7-3/16×2-1/16×6-1/16 in.)
Weight	3.5 lb (1.6 kg)

Kenwood follows a policy of continuous advancements in development.

For this reason specifications may be changed without notice.

DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement.

Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

La marque DOLBY et le double "D" sont des marques déposées des Dolby Laboratories.

Le système de réduction du bruit de fond est fabriqué sous licence des Dolby Laboratories.

Kenwood strebt ständige Verbesserungen in der Entwicklung an.

Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

DOLBY und Doppel-D-Symbol sind eingetragene Warenzeichen der Dolby Laboratories.

Dolby-Rauschunterdrückung mit Lizenz der Dolby Laboratories gefertigt.

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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